

EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment						Work Assignment Number 5-06				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-C-12-023			Contract Period 11/01/2012 To 04/30/2018 Base Option Period Number 5			Title of Work Assignment/SF Site Name CCL5 Chemical Selection				
Contractor CADMUS GROUP, INC., THE					Specify Section and paragraph of Contract SOW Sections 1.0 and 2.0					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance From 05/01/2017 To 04/30/2018					
Comments: Initial work assignment issuance to Option Period 5.										
<input type="checkbox"/> Superfund Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO <input type="checkbox"/> (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE: 0				
11/01/2012 To 04/30/2018										
This Action:						555				
Total:						555				
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee			LOE:			
Cumulative Approved:				Cost/Fee			LOE:			
Work Assignment Manager Name Clifton Townsend							Branch/Mail Code:			
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="text-align: center;">(Signature) (Date)</div>							Phone Number: 202-564-1576			
							FAX Number:			
Project Officer Name Ronald Coleman							Branch/Mail Code:			
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="text-align: center;">(Signature) (Date)</div>							Phone Number: 202-564-8491			
							FAX Number:			
Other Agency Official Name Erin Ridder							Branch/Mail Code:			
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="text-align: center;">(Signature) (Date)</div>							Phone Number: 513-487-2155			
							FAX Number:			
Contracting Official Name Sandra Stargardt-Licis							Branch/Mail Code:			
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="text-align: center;">(Signature) (Date)</div>							Phone Number: 513-487-2006			
							FAX Number:			

**PERFORMANCE WORK STATEMENT
CADMUS CONTRACT EP-C-12-023
WORK ASSIGNMENT 5-06**

A. TITLE: Support for the Contaminant Candidate List 5 Chemical Selection

B. PERIOD OF PERFORMANCE: May 1, 2017 through April 30, 2018

C. WORK ASSIGNMENT CONTRACTING OFFICER'S REPRESENTATIVE (WA COR):

Clifton Townsend
US EPA OW/OGWDW/SRMD
MC-4607M
1200 Pennsylvania Ave., NW
Washington, D.C. 20460
Phone: (202) 564-1576
Fax: (202) 564-3760
E-mail: townsend.clifton@epa.gov

ALTERNATE WORK ASSIGNMENT CONTRACTING OFFICER'S REPRESENTATIVE (AWA COR):

Meredith Russell
US EPA OW/OGWDW/SRMD
MC-4607M
1200 Pennsylvania Ave., NW
Washington, D.C. 20460
Phone: (202) 564-0814
Fax: (202) 564-3760
E-mail: Russell.meredith@epa.gov

D. BACKGROUND:

The Safe Drinking Water Act (SDWA) as amended in 1996 requires EPA to publish a list of contaminants that are known or anticipated to occur in public water systems, and which may require regulation under the SDWA known as the Drinking Water Contaminant Candidate List, or CCL. (Section 1412(b)(1)).

EPA published the final third drinking water Contaminant Candidate List (CCL 3) in the Federal Register on October 8, 2009. In developing the CCL 3, EPA implemented an improved process from that which was used for previous CCLs. The CCL 3 process was based on substantial expert input and recommendations from the National Academy of Science's National Research Council (NRC) and National Drinking Water Advisory Council (NDWAC). EPA used a multi-step process to identify contaminants for inclusion on the CCL 3. The first step involved identifying a broad universe of approximately 7,500 potential drinking water contaminants. The Agency then applied screening criteria to identify a preliminary CCL of almost 600 contaminants based on a contaminant's potential to occur in

public water systems and the potential for public health concern. These chemicals were then further evaluated using a classification approach and expert judgment to identify the CCL 3.

The Draft fourth Contaminant Candidate List (Draft CCL 4) was published on February 4, 2015, for public comment. The previous WA 4-06 continued the efforts to support and finalize EPA's CCL 4 process. The Final fourth Contaminant Candidate List (Final CCL 4) was published on November 17, 2016. This work assignment will continue to support the CCL 4 post publication and the initiation of the new Draft fifth Contaminant Candidate List (Draft CCL 5)

The contractor shall produce deliverables according to the statement of work below. Upon receipt of comments from the EPA WACOR, the contractor shall revise the draft deliverables into a finalized product(s) to support and document the CCL 5.

E. QUALITY ASSURANCE:

Tasks 1,2, and 3 in this work assignment requires the use of **secondary** data. Collection, use and analysis of data will be identical to the procedures described in the Supplemental Project Specific Quality Assurance Project Plan (SQAPP) completed and approved under task 0 of WA 0-06. EPA has determined that this approved SQAPP is appropriate for the tasks outlined in this Performance Work Statement. Based on this determination, the contractor is not required to modify the approved SQAPP for this work assignment. Table E-1 is a crosswalk of tasks in the approved that satisfies QA requirements for tasks in WA 5-06.

Table E-1 Crosswalk between approved SQAPP and WA 5-06

Tasks Described in SQAPP	Tasks in WA 5-06
2	1
4	2, 3

F. TASK DESCRIPTION:

Task 0: Work Plan and Monthly Progress Reports

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. In addition, the workplan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. If a subcontractor(s) is proposed and

subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and control costs.

In addition, the contractor shall prepare a statement indicating that this WA is a continuation of WA 0-06, 1-06, 2-06, and 3-06, and 4-06. The workplan shall explain that collection, use and analysis of data in this work assignment will be identical to the procedures described in the SQAPP completed under task(s) 0 of WA 0-06. This task also includes monthly progress and financial reports. The monthly progress report shall summarize activities conducted for the reporting period, and in a separate QA section, whether significant QA issues have been identified and how they are being resolved. Monthly financial reports must include a table with the invoice LOE and costs` broken out by the tasks in this WA. The contractor shall immediately notify the Contract Level COR (CL COR) and WA COR if any changes to the tasks involving the collection and analysis of the data occur and prepare a SQAPP supplementing the Contract Level (QAPP] accordingly. Work on these tasks cannot proceed until the contractor receives the EPA CL COR's notification of approval.

Deliverables: Work plan and monthly progress and financial reports submitted in accordance with contract requirements.

Task 1.0: Evaluation of Drinking Water Data Sources for CCL 5

Under the previous Cadmus Contract EP-C-07-022, WA 4-10, 5-10, and current EP-C-12-023 WA 0-06, and 1-06, WA 2-06, and WA 3-06, and 4-06, the contractor collected updated data to be utilized in CCL 4 from an approved list of data sources, compiled summary spreadsheets of data from each data source, input data into the CCL 4 data compilation, and submitted the final CCL 4 data compilation to EPA. Based upon the WACOR's written technical direction, the contractor shall evaluate new potential data sources for utilization in CCL 5 and sources that have been updated since CCL 3/ CCL 4. These should include data sources that were not considered for CCL 3 or CCL 4 and that may have become available after publication of the CCL 3/ CCL 4. The contractor should consider the assessment factors of relevance, completeness, redundancy, and retrievability as described in "Final Contaminant Candidate List 3 Chemicals: Identifying the Universe" in developing this plan. The contractor shall list and provide summaries of any new data sources that are utilized. Based upon the WACOR's written technical direction, the contractor shall collect data from a select number of updated data sources specified by the EPA WACOR and provide summary spread sheets or documents for existing and potentially new data sources that may be deemed necessary per EPA WACOR. At the direction of the EPA WACOR, the contractor shall continue to update the Final CCL 4 data compilation for CCL 5. The data compilation shall meet OGWDW and EPA data warehouse standards.

Deliverables: Draft and Final summaries of new data sources. Draft and Final spread sheets for existing data sources. Draft(s) data compilation containing data for use in CCL 5.

Task 2.0: Technical support for refinements to the CCL 5 process

At the written direction of the EPA WACOR, the contractor shall provide technical support and analyses needed to evaluate potential refinements/ changes to the CCL 3/ CCL 4 protocol. This may include analyses of refinements to the CCL 3/ CCL 4 process for selecting contaminants and evaluations related to specific groups of contaminants (e.g, those contaminants with Toxic Release Inventory (TRI) data for occurrence or pesticides). The contractor shall summarize and document any potential changes to the CCL protocol including documenting the technical analyses supporting those changes. The EPA WACOR will review and provide comments on the draft documentation and based on the EPA WAM's written comments, the contractor shall finalize the documentation.

Deliverables: Draft(s) documentation for refinements to CCL process

Task 3.0: Technical Analyses, Data Evaluation and Summaries of CCL contaminants

The contractor shall conduct technical analyses related to the CCL and provide technical and analytical writing related to the analyses per EPA WACOR instructions. Under previous WAs, the contractor analyzed data for other CCL 3 contaminants (that were not nominated) that were carried forward to the Draft CCL 4 and use to generate the Final CCL 4 to support the CCL 5 effort. The contractor shall support analyses for inquiries related to unregulated contaminants from CCL 3 and/ or CCL 4 processes. Per the EPA WACOR's written direction, the contractor shall update those contaminants that were used to create the data summaries based on data retrieved from other EPA processes (e.g. Regulatory Determinations and the Unregulated Contaminant Monitoring Rule). Under the previous WA, the contractor also submitted summary statistics (flag lists) about the contaminants in the Universe, PCCL, and Draft CCL 4 and Final CCL 4 such as information on the number of contaminants in various groups (such as pesticides, emerging contaminants, pharmaceuticals, disinfection byproducts, microbes, chemicals used in commerce such as industrial chemicals, and any other groups as necessary). At the written direction of the WACOR, the contractor shall update and finalize those flag lists (summary statistics) to reflect any changes from the Final CCL 4 to the CCL 5.

Deliverables: Draft summary statistics (flag lists) of Final CCL 4 contaminants. Data summaries of contaminants based on other EPA processes.

G. SCHEDULE OF DELIVERABLES:

The contractor shall ensure that all 508 compliant documents developed in all tasks outlined in this work assignment will align with EPA's 508 compliance checks (keywords, titles, tables, tags, etc.). The contractor is responsible for maintaining and utilizing the same version of Adobe as the EPA for purposes of developing and maintaining 508 compliant documents. To the extent practical, documents which are developed for this work assignment, and are to be 508 compliant should be designed to be

such from their inception, minimizing the effort for conversion and maximizing 508 compliance quality assurance.

Task	Deliverable	Due to EPA	No of Copies/ Medium
0- Work Plan and Monthly Progress Reports	Work plan and monthly progress and financial reports	Per Contract	Per Contract
1 - Evaluation of Drinking Water Data Sources for CCL 5	Draft summary spread sheets for any new compiled data sources* Draft(s) and Final data compilation containing data for the Final CCL 4 for inclusion into the Pre CCL 5*	Within 5 days of the conclusion of the meeting	Electronic
2 - Task 2.0: Technical support for refinements to CCL process 5	Draft(s) documentation for refinements to CCL process 4*	- TBD in written technical direction from the EPA WACOR - 10 days after receipt of written comments from the EPA WACOR	Electronic
3- Technical Analyses, Data Evaluation, and Summaries of Other CCL Contaminants	Data summaries of contaminants from other EPA processes -Draft(s)* Summary statistics of Final CCL 4 contaminants*	-TBD in written technical direction from the EPA WACOR -10 days after receipt of written comments from the EPA WACOR - TBD in written technical direction from the EPA WACOR - 7 days after receipt of written comments from the EPA WACOR	Electronic Electronic
* indicates the deliverable requires quality assurance subject to a QAPP			

H. LEVEL OF EFFORT ESTIMATES:

EPA estimates that 555 professional hours will be required to complete the tasks outlined in this Performance Work Statement.

I. CONFERENCE/MEETING GUIDELINES AND LIMITATIONS:

The contractor shall immediately notify the EPA Contracting Officer, CL COR and WA COR of any anticipated event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.

J. TRAVEL: No travel is anticipated for the performance period.

K. SPECIAL REPORTING REQUIREMENTS: The contractor shall discuss the progress of the Work Assignment and any issues in periodic teleconference calls, approximately on a bi-weekly basis (every other week) with the WACOR. The EPA WACOR will schedule these teleconference calls.

L. QUALITY ASSURANCE SURVEILLANCE PLAN: Per Contract requirements.

EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment						Work Assignment Number 5-09				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-C-12-023			Contract Period 11/01/2012 To 04/30/2018 Base Option Period Number 5			Title of Work Assignment/SF Site Name RAD-Protective Action Guide				
Contractor CADMUS GROUP, INC., THE					Specify Section and paragraph of Contract SOW Section: 1.6, 1.6.1, 2.1, 2.1.1, 5.1					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval						Period of Performance From 05/01/2017 To 04/30/2018				
Comments: Initial work assignment issuance to Option Period 5.										
<input type="checkbox"/> Superfund Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
SFO <input type="checkbox"/> Note: To report additional accounting and appropriations date use EPA Form 1900-69A. (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE: 0				
11/01/2012 To 04/30/2018										
This Action:						625				
Total:						625				
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee			LOE:			
Cumulative Approved:				Cost/Fee			LOE:			
Work Assignment Manager Name Samuel Hernandez							Branch/Mail Code:			
_____ (Signature) (Date)							Phone Number: 202-564-1735			
							FAX Number:			
Project Officer Name Ronald Coleman							Branch/Mail Code:			
_____ (Signature) (Date)							Phone Number: 202-564-8491			
							FAX Number:			
Other Agency Official Name Erin Ridder							Branch/Mail Code:			
_____ (Signature) (Date)							Phone Number: 513-487-2155			
							FAX Number:			
Contracting Official Name Sandra Stargardt-Licis							Branch/Mail Code:			
_____ (Signature) (Date)							Phone Number: 513-487-2006			
							FAX Number:			

**PERFORMANCE WORK STATEMENT
CADMUS CONTRACT EP-C-12-023
WORK ASSIGNMENT 5-09**

A. TITLE: Protective Action Guides for Drinking Water & Community Water System Survey

B. PERIOD OF PERFORMANCE: May 1, 2017 through April 30, 2018

C. WORK ASSIGNMENT CONTRACTING OFFICER'S REPRESENTATIVE (WA COR):

Samuel Hernandez – WACOR hernandez.samuel@epa.gov	202-564-1735	MC: 4607M 1200 Pennsylvania Ave., NW Washington, DC 20460
Erik Helm – Alternate WACOR helm.erik@epa.gov	202-566-1049	

D. BACKGROUND:

The U.S. Environmental Protection Agency (EPA) developed a Manual to assist public officials in planning for emergency response to radiological incidents. A radiological incident is an event or a series of events, deliberate or accidental, leading to the release or potential release into the environment of radioactive materials in sufficient quantity to warrant consideration of protective actions. The Manual provides radiological protection criteria for application to all incidents that would require consideration of protective actions.

During an incident with an uncontrolled source of radiation, protection of the public from unnecessary exposure to radiation may require some form of intervention that will disrupt normal living. Such intervention is termed a protective action. Examples of protective actions include: evacuating an area; sheltering-in-place within a building or protective structure; administering potassium iodide (KI) as a supplemental action; acquiring an alternate source of drinking water; interdiction of food/milk.

The Manual provides recommended numerical protective action guides (PAGs) for the principal protective actions available to public officials during a radiological incident. A PAG is defined as the projected dose to an individual from a release of radioactive material at which a specific protective action to reduce or avoid that dose is recommended. PAGs do not establish an acceptable level of risk for normal, nonemergency conditions, nor do they represent the boundary between safe and unsafe conditions. The PAGs are not legally binding regulations or standards and do not supersede any environmental laws.

The agency issued the final PAGs manual on January 2017.

The community water systems survey (CWSS) is used by the EPA to obtain data to support its development and evaluation of drinking water regulations. The survey will provide critical data to support regulatory development and implementation. EPA previously collected data in 1976, 1982, 1986, 1995,

2000, and 2006. EPA collected information on the most important operational and financial characteristics of community water systems.

The Community Water System Survey (CWSS) is part of EPA's ongoing effort to periodically collect information on the financial and operating characteristics of the public water supply industry in order to support the regulatory development process. EPA will use the information from the survey principally to prepare Economic Analyses (EAs) in support of new regulations and to analyze economic and operating factors that affect national drinking water quality.

EPA is required by SDWA to specify best available technologies (BATs) for the removal of drinking water contaminants and must consider technologies that can be afforded by different classes (i.e., sizes) of water systems. Data from the CWS Survey will be useful when identifying BATs for the removal of contaminants, conducting affordability analyses, and developing affordability criteria. The survey data will be used in a national-level affordability criteria document. In addition, the Agency must prepare EAs that detail the national costs and benefits of all proposed regulatory actions and alternatives under consideration.

E. QUALITY ASSURANCE:

Task(s) 1 & 2 in this work assignment requires the use of **secondary** data. Collection, use and analysis of data shall be identical to the procedures described in the Supplemental Project Specific Quality Assurance Project Plan (SQAPP) completed under Tasks 0 of WA 0-09, EPA has determined that this approved SQAPP is appropriate for the tasks outlined in this Performance Work Statement including the newly added efforts under Tasks 2 support activities related to the community water systems survey development. The work described for Tasks 1 and 2 in this work assignment are covered by Task 2 QA procedures outlined in the original SQAPP (WA 0-09). Based on this determination, the contractor is not required to modify the approved SQAPP for this action.

F. TASK DESCRIPTION:

Task 0: Work Plan and Monthly Progress Reports

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. In addition, the workplan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and control costs.

In addition, the contractor shall prepare a statement indicating that this WA is a continuation of WA 0-09, initially started in the Base Period of this contract. The workplan shall explain that collection, use and analysis of data in this work assignment will be identical to the procedures described in the SQAPP completed under task(s) 1, & 2 submitted and approved by EPA in the Base Period of this contract. This task also includes monthly progress and financial reports. The monthly progress report shall summarize activities conducted for the reporting period, and in a separate QA section, whether significant QA issues have been identified and how they are being resolved. Monthly financial reports must include a table with the invoice LOE and costs broken out by the tasks in this WA. The contractor shall immediately notify the Contract Level COR (CL COR) and WA COR if any changes to the tasks involving the collection and analysis of the data occur and prepare a SQAPP supplementing the Contract Level (QAPP) accordingly. Work on these tasks cannot proceed until the contractor receives the EPA CL COR's notification of approval.

Deliverables: Work plan and monthly progress and financial reports submitted in accordance with contract requirements.

Task 1: Support EPA's Development of PAG Guidance Document

The contractor shall continue supporting EPA's development of outreach materials for the Drinking Water PAG. As part of the effort the contractor shall consolidate and update as needed available draft basis documents. Basis documents include analysis of the risk levels to different sensitive subpopulations (i.e. children, pregnant women) associated with different PAG trigger levels. The basis documents also contain explanations of how the health effects of radiation at different trigger levels could be clearly and effectively communicated to the public. EPA anticipates that any needed updates will be drafted by EPA and then transmitted to the Contractor for technical review and updates. EPA will direct the contractor to complete any necessary revisions.

The document shall include sections covering the following: basic information describing radiation, radiation health effects, risk communication, understanding radiation risks, treatment technologies, analytical methods, and available approaches for emergency planning in response to a radiation contamination incident.

Further, this task includes providing descriptions about the appropriateness of the assumptions used in the development of the DRLs for the DW PAG and if needed develop additional support material (evaluations and analysis) in support of such assumptions, as specified in a Technical Directive from the EPA WACOR. In addition, the contractor shall support EPA by developing responses to the technical questions related to the selection of Drinking Water PAGs.

EPA estimates that 30% of the total effort will be required in support of this task.

Deliverables:

- Draft Drinking Water Basis Document & Technical Responses
- Final Drinking Water Basis Document & Technical Responses

Task 2 –Support EPA’s Development of Project Plan and logistics to initiate a Community Water System Survey

The contractor shall support the development of project plan and logistics to initiate a community water system survey. EPA anticipates that all planning activities will secure the successful deployment of the survey which will likely happen in mid-2019.

The contractor shall also begin the process to develop a draft Information Collection Request to secure the approval from OMB to conduct the survey. As part of the planning process the contractor shall provide recommendations on: survey structure, survey deployment, survey sample size methodology, appropriate economic indicators, and measures to describe system characteristics.

EPA anticipates that project plan and logistics documents will be drafted by EPA and then transmitted to the Contractor for the development of technical analysis and evaluation of areas where additional information is required. In addition, the contractor shall review and update the document as directed by EPA. EPA will consider recommendations and then direct the contractor to complete any necessary revisions.

EPA estimates that 70% of the total effort will be required in support of this task.

Deliverables:

- Draft project plan and logistics Document
- Draft Information Collection Request Document

G. SCHEDULE OF DELIVERABLES:

Task	Deliverable	Subject to QA	Due to EPA	No. of Copies/Medium
0	Work Plan	N	Per Contract requirements	Electronic copies (MS Word) as requested by WACOR
0	Monthly Progress Reports	N	Per Contract requirements	Electronic copies (MS Word) as requested by WACOR
1	Draft Drinking Water Basis Document & Technical Responses (508 compliant)	Y	As specified in Technical Direction (within 45 days of end of the period)	Electronic copies (MS Word) as requested by WACOR
1	Final Drinking Water Basis Document & Technical Responses (508 compliant)	Y	As specified in Technical Direction (within 30 days of end of the period)	Electronic copies (MS Word) as requested by WACOR
2	Draft project plan and logistics Document	Y	As specified in Technical Direction (within 180 days of end of the period)	Electronic copies (MS Word) as requested by WACOR
2	Draft Information Collection Request Document	Y	As specified in Technical Direction (within 60 days of end of the period)	Electronic copies (MS Word) as requested by WACOR

H. LEVEL OF EFFORT ESTIMATES:

EPA estimates that 625 professional hours will be required to complete the tasks outlined in this Performance Work Statement.

I. CONFERENCE/MEETING GUIDELINES AND LIMITATIONS:

The contractor shall immediately notify the EPA Contracting Officer, CL COR and WA COR of any anticipated event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.

J. TRAVEL: *None.*

K. SPECIAL REPORTING REQUIREMENTS: *None.*

L. QUALITY ASSURANCE SURVEILLANCE PLAN: *Per Contract requirements.*

EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment						Work Assignment Number 5-11				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-C-12-023			Contract Period 11/01/2012 To 04/30/2018 Base Option Period Number 5			Title of Work Assignment/SF Site Name Regulatory Determination 4				
Contractor CADMUS GROUP, INC., THE						Specify Section and paragraph of Contract SOW Section 1.0, 5.0 and 6.0				
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval						Period of Performance From 05/01/2017 To 04/30/2018				
Comments: Initial work assignment issuance to Option Period 5.										
<input type="checkbox"/> Superfund Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
SFO <input type="checkbox"/> (Max 2) Note: To report additional accounting and appropriations date use EPA Form 1900-69A.										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:		LOE:						
11/01/2012 To 04/30/2018				0						
This Action:				1,775						
Total:				1,775						
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee		LOE:				
Cumulative Approved:				Cost/Fee		LOE:				
Work Assignment Manager Name Julie Javier <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 202-564-2335 FAX Number:				
Project Officer Name Ronald Coleman <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 202-564-8491 FAX Number:				
Other Agency Official Name Erin Ridder <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 513-487-2155 FAX Number:				
Contracting Official Name Sandra Stargardt-Licis <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 513-487-2006 FAX Number:				

**PERFORMANCE WORK STATEMENT
CADMUS CONTRACT EP-C-12-023
WORK ASSIGNMENT 5-11**

- A. TITLE:** Support for Regulatory Determination 4
B. PERIOD OF PERFORMANCE: May 1, 2017 through April 30, 2018
C. WORK ASSIGNMENT CONTRACTING OFFICER'S REPRESENTATIVE (WA COR):

Julie Javier
1201 Constitution Ave., NW
Washington, DC 20460
Mail Code 4607M
Tel: 202-564-2335
Email: javier.julie@epa.gov

ALTERNATE WORK ASSIGNMENT CONTRACTING OFFICER'S REPRESENTATIVE (AWA COR):

Zeno Bain
1201 Constitution Ave., NW
Washington, DC 20460
Mail Code 4607M
Tel: 202-564-5970
Email: bain.zeno@epa.gov

D. BACKGROUND:

The Safe Drinking Water Act (SDWA), as amended in 1996, directed the Environmental Protection Agency (EPA) to publish a list of contaminants (referred to as the Contaminant Candidate List, or CCL) to assist in priority-setting efforts. The SDWA also directs EPA to select five or more contaminants from the CCL and determine whether or not to regulate these contaminants with a National Primary Drinking Water Regulation (NPDWR). This process is called Regulatory Determination (RD).

This work assignment, WA 5-11, outlines work to support the fourth round of Regulatory Determination (RD4), i.e., the regulatory determination process for contaminants on the Fourth CCL (CCL4). It continues efforts that were started under the previous work assignments such as the occurrence analyses for the CCL4 contaminants and the development of the supporting documents for RD4. It also contains tasks to support other efforts such as the analyses needed by the EPA to make a final regulatory determination for strontium. **Section F** of this document lists the tasks covered by WA 5-11.

E. QUALITY ASSURANCE:

Tasks 1 to 6 in this work assignment requires the use of **secondary** data. Collection, use and analysis of data will be identical to the procedures described in the Supplemental Project Specific Quality Assurance Project Plan (SQAPP) completed under Task 0 of WA 0-11. This is consistent with the Agency's Quality

Assurance (QA) requirements. The following table shows which tasks under this work assignment correspond to which tasks under the SQAPP.

WA 5-11 Task	SQAPP Task
1	2
2	5
3	5
4	5
5	2.3
6	4

In the monthly progress report, the Contractor shall address the QA requirements outlined under Task 0, below.

F. TASK DESCRIPTION:

Task 0: Work Plan and Monthly Progress Reports

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. In addition, the workplan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and control costs.

In addition, the contractor shall prepare a statement indicating that this WA is a continuation of WA 4-11. The workplan shall explain that collection, use and analysis of data in this work assignment will be identical to the procedures described in the SQAPP completed under task(s) 0 of WA 0-11. This task also includes monthly progress and financial reports. The monthly progress report shall summarize activities conducted for the reporting period, and in a separate QA section, whether significant QA issues have been identified and how they are being resolved. Monthly financial reports must include a table with the invoice LOE and costs broken out by the tasks in this WA. The contractor shall immediately notify the Contract Level COR (CL COR) and WA COR if any changes to the tasks involving the collection and analysis of the data occur and prepare a SQAPP supplementing the Contract Level (QAPP) accordingly. Work on these tasks cannot proceed until the contractor receives the EPA CL COR's notification of approval.

Deliverables:

- Work plan and monthly progress and financial reports submitted in accordance with contract requirements.

Task 1: Occurrence Analyses for CCL4 Contaminants

The contractor shall conduct occurrence analyses for contaminants in CCL4 and other contaminants as directed by the WA COR to support the RD4 process. The contractor shall consider the data sources that are currently available as well as any new data sources that may become available during the option year, in discussion with EPA, as described in technical direction from the WA COR. EPA expects that the occurrence data will come mainly from monitoring performed under the Third Unregulated Contaminant Monitoring Rule (UCMR3). Occurrence analyses shall be conducted using a two-stage analytical approach, the same approach outlined in previous work assignments. A summary of the two-stage approach is described below.

In Stage 1, the data are first reviewed, quality-checked, and characterized. They are then analyzed to generate simple, clear non-parametric estimates of contaminant occurrence. In Stage 2, statistical modeling is used to generate national probability estimates of contaminant occurrence based on estimated annual (or longer-term) mean concentrations of contaminants along with statistical measures of uncertainty and error. As directed by the WA COR, Stage 2 modeling may be done for contaminants with occurrence at potential levels and frequency of public health concern based on Stage 1 results.

To the extent that new occurrence data sources become available, the contractor shall update the analysis of the occurrence data and consequently, update the Stage 1 and Stage 2 analyses reports. The contractor shall also use publically available data to construct national extrapolations for specific chemicals when directed to do so by the WA COR.

For planning purposes, EPA estimates that 29% of the technical LOE will be allocated for this task.

Deliverables:

- Stage 1 analysis report
- Stage 2 analysis report

Task 2: Background Documents for CCL4 Contaminants

The contractor shall update the background documents and status tables for a subset of CCL4 contaminants, as identified by the WA COR. The background documents and status tables were previously completed under WA 3-11. They provided detailed and summarized information about available occurrence and health data for each contaminant. The contractor shall update these documents as appropriate when new data become available. The contractor shall make sure that the final documents are compliant with Section 508 standards for web posting.

For planning purposes, EPA estimates that 8% of the technical LOE will be allocated for this task.

Deliverables

- Updated background documents and summary tables

Task 3: Support Documents for CCL4 Contaminants with Potential Regulatory Determinations

The contractor shall develop the regulatory determination support documents for contaminants identified by EPA as candidates for regulatory determination. To put together the support documents, the contractor shall compile information and data on the contaminant's (1) physical and chemical properties, (2) use and environmental release, (3) environmental fate, (4) potential health effects, and (5) occurrence and exposure estimates.

Scientific journal articles published in foreign languages shall be translated for EPA use as directed by the WA COR. As needed, the contractor shall also conduct and describe analyses not conducted previously that may be required to develop text, exhibits, and appendices of the documents. The contractor shall update the documents as new data and information become available as directed by the WA COR. The contractor shall make sure that the final documents are compliant with Section 508 standards for web posting.

For planning purposes, EPA estimates that 29% of the technical LOE will be allocated for this task.

Deliverables

- RD4 Support Documents

Task 4: Protocol Document for RD4

As directed by the WA COR, the contractor shall update the *Regulatory Determination 3 Protocol Document* with changes made to the regulatory determination process for RD4. Examples of changes being considered for RD4 are the addition of new data sources, the removal of others, and the use of modeling in Phase 2 of the protocol. The contractor shall make sure that the final document is compliant with Section 508 standards for web posting. For planning purposes, EPA estimates that 6% of the technical LOE will be allocated for this task.

Deliverables:

- Protocol Document for RD4

Task 5: Strontium Analyses

The contractor shall conduct quality assurance checks and reviews on analyses related to strontium. These analyses include but are not limited to the relative source contribution (RSC), occurrence, and assessment of treatment technology. EPA needs these analyses to make a final regulatory determination on strontium. As directed by the WA COR, the contractor shall update the support documents for strontium. The contractor shall make sure that the final documents are compliant with Section 508 standards for web posting.

For planning purposes, EPA estimates that 17% of the technical LOE will be allocated for this task.

Deliverables:

- Occurrence analyses
- Updated support documents

Task 6: Other Technical and Programmatic Support

This task covers work related to meeting support and other analyses deemed by the WA COR to be necessary to support the work for RD4. The contractor shall attend and prepare summaries of all workgroup meetings and other meetings related to the tasks under this work assignment. As directed by the WA COR, the contractor shall prepare and review materials for meetings such as handouts, presentations, memos, etc. The contractor shall also develop and complete other materials such as support documents and discussion papers the WA COR deems appropriate and necessary. That contractor shall make sure materials that will be posted on the web are compliant with 508 standards. As directed by the WA COR, the contractor shall conduct occurrence analysis and other necessary analyses for emerging contaminants and other contaminants of interest. The contractor shall consider the data sources that are currently available as well as any new data sources that may become available during the option year, in discussion with EPA, as described in technical direction from the WA COR.

For planning purposes, EPA estimates that 11% of the technical LOE will be allocated for this task.

Deliverables:

- Meeting notes and summaries
- Briefing and presentation materials (such as presentations, memos, handouts)
- Support documents and discussion papers
- Occurrence analysis for emerging contaminants and other contaminants of interest

G. SCHEDULE OF DELIVERABLES:

Task	Deliverable	Subject to QA (Y/N)	Due to EPA	No. of Copies
Task 0: Work Plan and Monthly Progress Reports	Work plan	N	Per contract requirements	Electronic (to Contract Level COR and WACOR)
	Monthly progress and financial reports	N	Per contract requirements	Electronic (to Contract Level COR and WACOR)

Task	Deliverable	Subject to QA (Y/N)	Due to EPA	No. of Copies
Task 1: Occurrence Analyses for CCL4 Contaminants	Stage 1 Analysis Report	Y	Two weeks after receipt of technical direction or as specified in technical direction from EPA	Electronic (to WACOR)
	Stage 2 Analysis Report	Y	Two weeks after receipt of technical direction or as specified in technical direction from EPA	Electronic (to WACOR)
Task 2: Background Documents for CCL4 Contaminants	Updated background documents and summary tables	Y	Final or revised draft due two weeks after receipt of EPA's written review or comment, or as specified in technical direction from EPA	Electronic (to WACOR)
Task 3: Support Documents for CCL4 Contaminants with Potential Regulatory Determinations	RD4 Support Documents	Y	Final or revised draft due two weeks after receipt of EPA's written review or comment, or as specified in technical direction from EPA	Electronic (to WACOR)
Task 4: Protocol Document for RD4	Protocol Document for RD4	Y	Final or revised draft due 2 weeks after receipt of EPA's written review or comment, or as specified in technical direction from EPA	Electronic (to WACOR)

Task	Deliverable	Subject to QA (Y/N)	Due to EPA	No. of Copies
Task 5: Strontium Analyses	Occurrence analyses	Y	Two weeks after receipt of technical direction or as specified in technical direction from EPA	Electronic (to WACOR)
	Updated support documents	Y	Final or revised draft due two weeks after receipt of EPA's written review or comment, or as specified in technical direction from EPA	Electronic (to WACOR)
Task 6: Other Technical and Programmatic Support	Meeting notes and summaries	N	A week after meeting or as specified in technical direction from EPA	Electronic (to WACOR)
	Briefing and presentation materials (such as presentations, memos, handouts)	N	Two weeks after receipt of technical direction or as specified in technical direction from EPA	Electronic (to WACOR)
	Support documents and discussion papers	Y	Final or revised draft due two weeks after receipt of EPA's written review or comment, or as specified in technical direction from EPA	Electronic (to WACOR)

Task	Deliverable	Subject to QA (Y/N)	Due to EPA	No. of Copies
	Occurrence analysis for emerging contaminants and other contaminants of interest.	Y	Two weeks after receipt of technical direction or as specified in technical direction from EPA	Electronic (to WACOR)

H. LEVEL OF EFFORT ESTIMATES:

EPA estimates that 1775 professional hours will be required to complete the tasks outlined in this Performance Work Statement.

I. CONFERENCE/MEETING GUIDELINES AND LIMITATIONS:

The contractor shall immediately notify the EPA Contracting Officer, CL COR and WA COR of any anticipated event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.

J. TRAVEL:

Only local travel is expected.

K. SPECIAL REPORTING REQUIREMENTS:

The contractor shall provide status updates for each task on a weekly or bi-weekly basis, either through a meeting with the WA COR or over the telephone or email. Also, the contractor shall provide budget updates monthly by phone or email.

L. QUALITY ASSURANCE SURVEILLANCE PLAN:

Per Contract requirements

EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment						Work Assignment Number 5-13				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-C-12-023			Contract Period 11/01/2012 To 04/30/2018 Base Option Period Number 5			Title of Work Assignment/SF Site Name CCL4: Microbes				
Contractor CADMUS GROUP, INC., THE					Specify Section and paragraph of Contract SOW Section 1.0, 3.0, 4.0, 6.0					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance From 05/01/2017 To 04/30/2018					
Comments: Initial work assignment issuance to Option Period 5.										
<input type="checkbox"/> Superfund Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
SFO <input type="checkbox"/> Note: To report additional accounting and appropriations date use EPA Form 1900-69A. (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE: 0				
11/01/2012 To 04/30/2018										
This Action:						840				
Total:						840				
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee			LOE:			
Cumulative Approved:				Cost/Fee			LOE:			
Work Assignment Manager Name Hannah Holsinger							Branch/Mail Code:			
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;">(Signature)(Date)</div>							Phone Number: 202-564-0000			
							FAX Number:			
Project Officer Name Ronald Coleman							Branch/Mail Code:			
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;">(Signature)(Date)</div>							Phone Number: 202-564-8491			
							FAX Number:			
Other Agency Official Name Erin Ridder							Branch/Mail Code:			
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;">(Signature)(Date)</div>							Phone Number: 513-487-2155			
							FAX Number:			
Contracting Official Name Sandra Stargardt-Licis							Branch/Mail Code:			
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;">(Signature)(Date)</div>							Phone Number: 513-487-2006			
							FAX Number:			

**PERFORMANCE WORK STATEMENT
CADMUS CONTRACT EP-C-12-023
WORK ASSIGNMENT 5-13**

A. TITLE: Support for Emerging Contaminants and the Contaminant Candidate List 5 (CCL 5 Microbes)

B. PERIOD OF PERFORMANCE: May 1, 2017 through April 30, 2018

C. WORK ASSIGNMENT CONTRACTING OFFICER'S REPRESENTATIVE (WA COR):

Hannah Holsinger
US EPA, Room 2209W
Mail Code 4607M
1200 Pennsylvania Ave, N.W.
Washington, DC 20460
Tel: 202/564-0403; Fax: 202/564-3767
Email: holsinger.hannah@epa.gov

ALTERNATE WORK ASSIGNMENT CONTRACTING OFFICER'S REPRESENTATIVE (AWA COR):

Katie Foreman
US EPA, Room 2227B
Mail Code 4607M
1200 Pennsylvania Ave, N.W.
Washington, DC 20460
Tel: 202/564-3403; Fax: 202/564-3767
Email: foreman.katherine@epa.gov

D. BACKGROUND:

In order to protect public health, emerging contaminants that may be of concern in drinking water involve evaluating these contaminants and supporting states and public water systems in their efforts to protect public health. The Safe Drinking Water Act (SDWA), as amended in 1996, requires EPA to publish a list of contaminants, referred to as the drinking water Contaminant Candidate List (CCL), that are known or anticipated to occur in public water systems, and which may require regulation under the SDWA (Section 1412(b)(1)).

EPA published the final third drinking water Contaminant Candidate List (CCL 3) in the *Federal Register* on October 8, 2009. In developing the CCL 3, EPA implemented an improved process from those used in previous CCLs. The CCL 3 process was based on substantial expert input and recommendations from the National Academy of Science's National Research Council (NRC) and National Drinking Water Advisory Council (NDWAC). EPA used a multi-step process to identify contaminants for inclusion on the CCL 3. The list of bacteria, viruses, protozoa, helminths, and fungi in Taylor et al. (2001) was adopted upon the recommendation of NDWAC (2004) as the starting point for the CCL 3 microbial Universe. The microbial

Universe included a total of 1,425 human pathogens including those compiled by Taylor et al. (2001) as well as nominations from the scientific community and EPA experts (*Contaminant Candidate List 3 Microbes: Identifying the Universe*).

The agency then applied 11 screening criteria to identify a preliminary CCL (PCCL) of 29 pathogens based on their potential to occur in public water systems and the potential for public health concern (See document: *Contaminant Candidate List 3 Microbes: PCCL TO CCL Process*). These microbes were then further evaluated using a classification approach and expert judgment to identify the CCL 3. The screening criteria were developed, in part, following the recommendations of the NRC and NDWAC workgroup on the CCL process and further reviewed by a panel of external experts. Criteria were then further refined through deliberations of the EPA microbiology workgroup based upon the expert panel report.

Previous work assignments (WA) focused efforts to review and update existing information on drinking water microbial contaminants and provide technical support through the publishing of the fourth Contaminant Candidate List (CCL 4) as well as working to review emerging contaminant information and developing tools and resources to support public water systems, states, and tribes in managing their risks from emerging contaminants (such as cyanotoxins). The fourth draft CCL list was published February 4th, 2015 and the final CCL 4 was published November 17, 2017. This WA will build upon efforts completed for previous efforts under WA's 4-37 and 5-37 issued under Cadmus Contract EP-C-07-022. This WA is also a follow on to efforts completed under the current contract EP-C-12-023 on previous Cadmus WA's 0-13, 1-13, 2-13, 3-13 and 4-13. The contractor shall utilize materials and analyses completed for previous efforts as much as possible. The documents, references, and most of the data sources that serve as applicable references are in the possession of the contractor. A list of some of these documents is provided in the "References" section at the end of this document. This list is not meant to be comprehensive and additional references could be added by either the contractor or the EPA WACOR. Under this work assignment the contractor shall continue to support EPA in the CCL 5 development process and continue to support EPA in evaluating emerging contaminants, such as continuing the work on cyanotoxins to support public water systems, states, and tribes manage the risks from emerging contaminants to drinking water. Public water systems, states, and tribes can face challenges from unregulated contaminants. EPA works to support these systems to protect public health from associated risks from unregulated contaminants.

E. QUALITY ASSURANCE:

Tasks 1 and 2 of this work assignment requires the use of **secondary** data. Collection, use and analysis of data will be identical to the procedures described in the Supplemental Project Specific Quality Assurance Project Plan (SQAPP) completed and approved by EPA under Task 0 of WA 0-13 and under Task 0 of WA-3-13 Amendment 1. This is consistent with the Agency's Quality Assurance (QA) requirements. In the monthly progress report, the Contractor shall address the QA requirements outlined under Task 0, below. Tasks of this PWS correspond to the following Tasks within each SQAPP: Task 2 (SQAPP 3-13 Task 5), Task 1 (SQAPP 3-13 Task 6). The project specific QA requirements must be addressed in the monthly progress reports as specified under Task 0, below.

Approved SQAPP Description	SQAPP Task No.	Option Period 5, WA 5-13 Task No.
Support for Additional Cyanotoxin Activities	SQAPP 3-13 Task 5	2
Support for CCL 5 Activities	SQAPP 3-13 Task 6	1

F. TASK DESCRIPTION:

Task 0: Work Plan and Monthly Progress Reports

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. In addition, the workplan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and control costs.

In addition, the contractor shall prepare a statement indicating that this WA is a continuation of WA 0-13, 1-13, 2-13, 3-13 and 4-13. The workplan shall explain that collection, use and analysis of data in this work assignment will be identical to the procedures described in the SQAPP completed under task 0 of WA 0-13, task 0 amendment to WA 3-13. This task also includes monthly progress and financial reports. The monthly progress report shall summarize activities conducted for the reporting period, and in a separate QA section, whether significant QA issues have been identified and how they are being resolved. Monthly financial reports must include a table with the invoice LOE and costs broken out by the tasks in this WA. The contractor shall immediately notify the Contract Level COR (CL COR) and WA COR if any changes to the tasks involving the collection and analysis of the data occur and prepare a SQAPP supplementing the Contract Level (QAPP) accordingly. Work on these tasks cannot proceed until the contractor receives the EPA CL COR's notification of approval.

Deliverables: Work plan and monthly progress and financial reports submitted in accordance with contract requirements.

Task 1.0 Support the Development of CCL 5 Microbial List

Based on previous WAs, the contractor has provided support in the development of the draft and final CCL 4. The contractor shall, as directed by the WACOR through technical direction, continue to provide support for the microbial CCL process by supporting the development of CCL 5 including reviewing the CCL 3 microbial process, reviewing available (new and updated) data sources, evaluating existing data (health and occurrence data), updating or developing any support documents as needed and providing other general support as needed.

Deliverables: draft CCL 5 support documents (for planning purposes up to two internal documents)

Task 2.0: Support for Cyanotoxin Activities

Task 2.1: Meeting/Workshop Support

The contractor shall continue to provide logistical support for up to 3 meeting/workshops (as directed by the WACOR through technical direction), started under WA 3-13 and continued under WA 4-13, to discuss harmful algal blooms and cyanotoxins including risk management for public water systems, treatment options, communication tools, and source water protection. These activities will allow for discussion and sharing of information and experiences with cyanotoxins produced by cyanobacteria. As directed by EPA through technical direction, the contractor shall support meeting activities including but not limited to fact sheets, hand-outs; identification of meeting rooms and facilities and online meeting resources; travel arrangements for expert speakers; meeting facilitation; and note-taking and completion of meeting summary reports and/or question and answer documents for the record, as directed by the WACOR through technical direction.

EPA projects that the individual events outlined under this task will not reach the agency's \$20,000 threshold for conference spending. This Task shall be tracked separately for the purposes of monthly reporting and the contractor shall ensure that this Task meets the requirements of **Section I.**

CONFERENCE/MEETING GUIDELINES AND LIMITATIONS.

Deliverables: As directed by the EPA WACOR, draft(s) and final versions of fact sheets, and hand-outs (508 compliant); draft(s) and final versions of summary reports and meeting notes, as specified in technical direction from EPA WACOR

Task 2.2: Cyanotoxin Support Materials

The contractor shall continue to provide support for the development of reference materials for public water systems, states, and tribes as started under previous work assignments and as determined necessary by EPA. The contractor shall continue work on the video communication materials started under WA 4-13 developed to provide quick information on the Cyanotoxin Risk Communication Toolbox and the Cyanotoxin Management Plan Template and Example Plans. The development of this videos shall follow the process outlined in the recommended timeline developed by Cadmus under WA 4-13. Two draft and two final videos shall be developed under this WA (one draft and one final for each video topic), following the storyboards developed under WA 4-13.

The contractor shall develop a white paper evaluating the impacts of source water mitigation strategies for harmful algal blooms and cyanotoxins on sources of drinking water and the impacts on water quality and treatment for the downstream public water system. Waterbody managers and public water system managers have source water mitigation tools available to them to reduce the impact of a harmful algal bloom to a waterbody and/or source water. The contract shall compile information on these mitigation strategies pertaining to their impacts on water quality changes and potential impacts to the drinking water treatment, unintended consequences the change to water quality may have on the drinking water treatment, as well as what changes to water quality and treatment may have on the finished drinking water.

Deliverables: As directed by the EPA WACOR, two communication videos (two draft versions and two final versions). (One video providing information on EPA's Cyanotoxin Risk Communication Toolbox and a second video on EPA's Cyanotoxin Management Plan Template and Example Plans.) As directed by the EPA WACOR, one draft and one final white paper describing source water mitigation strategy impacts on public water systems.

G. SCHEDULE OF DELIVERABLES:

The contractor shall deliver all draft and final documents in Microsoft Office documents and/or PDFs and will comply with the EPA's 508 compliance requirements for posting on the Internet as directed by the EPA WACOR. Unless otherwise requested by the EPA WACOR in writing, the contractor shall deliver all other products electronically. All due dates below are calendar days, weeks, or months unless otherwise noted.

Task	Deliverable Description	Subject to QA	Due to EPA	No. of copies
0	Work plan, Technical Progress Reports	Y	Per contract requirements	1
1.0	Draft CCL 5 support documents	Y	TBD in written technical direction from the EPA WACOR	1
2.1	Draft(s) and final versions of fact sheets, and hand-outs (508 compliant); draft(s) and final versions of summary reports and meeting notes, as specified in technical direction from EPA WACOR	Y	TBD in written technical direction from the EPA WACOR	1
2.2	Two communication videos (two draft versions and two final versions) One draft and one final white paper describing source water mitigation strategy impacts on public water systems	Y Y	Drafts due April 2017, Final videos due June 2017 Draft due to EPA June 2017; Final due to EPA July 2017	1

H. LEVEL OF EFFORT ESTIMATES:

EPA estimates that 840 professional hours will be required to complete the tasks outlined in this Performance Work Statement.

I. CONFERENCE/MEETING GUIDELINES AND LIMITATIONS:

The contractor shall immediately notify the EPA Contracting Officer, CL COR and WA COR of any anticipated event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.

J. TRAVEL:

Travel is anticipated from the Contractor to support the work outlined in Task 2.1. For planning purposes, the contractor shall assume travel for one project staff for up to two meetings/workshops. The contractor shall assume each meeting/workshop will require 3-4 days to support meeting/workshop logistics. For Task 2.1 the specific locations for the meetings/locations have not yet been selected but for planning purposes please assume both locations in the North East such as New York and Boston as examples.

K. SPECIAL REPORTING REQUIREMENTS: The contractor shall address each task separately in the monthly progress and financial support.

L. QUALITY ASSURANCE SURVEILLANCE PLAN: Per Contract requirements.

M. REFERENCES

- Contaminant Candidate List 3 Microbes: Identifying the Universe (EPA 815-R- R-09-004)
- Contaminant Candidate List 3 Microbes: Screening to the PCCL (EPA 815-R-09-005)
- Contaminant Candidate List 3 Microbes: PCCL TO CCL Process (EPA 815-R-09-009)
- Drinking Water Contaminant Candidate List 3 – Draft Notice
- Drinking Water Contaminant Candidate List 3 – Final Rule
- Microbial Expert Input and Review for the Third Contaminant Candidate List (EPA 815-R-08-0010)
- Summary of Nominations for the Third Contaminant Candidate List (August, 2009)
- Guidelines for Canadian Drinking Water Quality (CADW): Summary of Guidelines – Health Canada
- Health Canada. 2006. Guidelines for Canadian Drinking Water Quality (CADW): Guideline Technical Document - Bacterial Waterborne Pathogens: Current and Emerging Organisms of

Concern.

- Knipe, D. M. and P. M. Howley (ed.). 2007. Fields Virology, 5th Edition, Wolters-Kluwer Lippincott Williams & Williams, Philadelphia.
- Knipe, D. M. and P. M. Howley (ed.). 2013. Fields Virology, 6th Edition, Lippincott Williams & Williams, Philadelphia.
- Murray, P. R., E. J. Baron, J. H. Jorgensen, M. L. Landry, and M. A. Pfaller (ed.). 2007. Manual of Clinical Microbiology, 9th Edition, ASM Press, Washington, DC.
- Murray, P. R., E. J. Baron, J. H. Jorgensen, M. L. Landry, and M. A. Pfaller (ed.). 2011. Manual of Clinical Microbiology, 10th Edition, ASM Press, Washington, DC.
- Taylor, H.L., S.M. Latham, and M.E.J. Woolhouse. 2001. Risk factors for human disease emergence. *Phil. Trans. R. Soc. Lond. B.* (356): 983 – 989.
- Appendix to *Phil. Trans. R. Soc. Lond. B.* (ISSN 0962 8436) No. 1411, pp. 983 – 989, July 29, 2001.
- WHO Guidelines for Drinking Water Quality (4th Edition, 2011)
- USEPA. 2015. Recommendations for Public Water Systems to Manage Cyanotoxins in Drinking Water. Available online at <http://www.epa.gov/nutrient-policy-data/recommendations-public-water-systems-manage-cyanotoxins-drinking-water>
- USEPA. 2015. Algal Toxin Risk Assessment and Management Strategic Plan for Drinking Water. Available online at <http://www.epa.gov/nutrient-policy-data/algal-toxin-risk-assessment-and-management-strategic-plan-drinking-water>

EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment						Work Assignment Number 5-14				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-C-12-023			Contract Period 11/01/2012 To 04/30/2018 Base Option Period Number 5			Title of Work Assignment/SF Site Name Lab Certification				
Contractor CADMUS GROUP, INC., THE					Specify Section and paragraph of Contract SOW Section 1.2.2					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance From 05/01/2017 To 04/30/2018					
Comments: Initial work assignment issuance to Option Period 5.										
<input type="checkbox"/> Superfund Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
SFO <input type="checkbox"/> Note: To report additional accounting and appropriations date use EPA Form 1900-69A. (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:		LOE:						
11/01/2012 To 04/30/2018				0						
This Action:				2,500						
Total:				2,500						
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee		LOE:				
Cumulative Approved:				Cost/Fee		LOE:				
Work Assignment Manager Name Paul Grimmett						Branch/Mail Code:				
_____ (Signature) (Date)						Phone Number: 513-569-7663				
						FAX Number:				
Project Officer Name Ronald Coleman						Branch/Mail Code:				
_____ (Signature) (Date)						Phone Number: 202-564-8491				
						FAX Number:				
Other Agency Official Name Erin Ridder						Branch/Mail Code:				
_____ (Signature) (Date)						Phone Number: 513-487-2155				
						FAX Number:				
Contracting Official Name Sandra Stargardt-Licis						Branch/Mail Code:				
_____ (Signature) (Date)						Phone Number: 513-487-2006				
						FAX Number:				

**PERFORMANCE WORK STATEMENT
CADMUS CONTRACT EP-C-12-023
WORK ASSIGNMENT 5-14**

A. TITLE: Laboratory Certification Chemistry/Microbiology Training Support and Oversight

B. PERIOD OF PERFORMANCE: May 1, 2017 through April 30, 2018

**C. WORK ASSIGNMENT CONTRACTING OFFICER'S REPRESENTATIVE
(WACOR):**

Paul Grimmett
USEPA/OGWDW/SRMD/TSC
26 W MLK Dr. MC140
Cincinnati, OH 45268
grimmett.paul@epa.gov

**ALTERNATE WORK ASSIGNMENT CONTRACTING OFFICER'S
REPRESENTATIVE (Alt-WACOR):**

Glynda Smith
USEPA/OGWDW/SRMD/TSC
26 W MLK Dr. MC140
Cincinnati, OH 45268
smith.glynda@epa.gov

D. BACKGROUND:

The Office of Ground Water and Drinking Water's Technical Support Center (TSC) has the responsibility for developing and implementing a national certification program for laboratories that analyze drinking water samples in compliance with the Safe Drinking Water Act. Whereas 40 CFR 142.10(b) generally requires the establishment and maintenance of State laboratory capability for all regulated analytes, TSC uses the Manual for the Certification of Laboratories Analyzing Drinking Water, Fifth Edition to determine the adequacy of State certification programs. TSC oversees the EPA Regional audits and assessments of the State principle labs and programs. The tasks outlined in this performance work statement support TSC's activities related to implementing the requirements of the National Primary Drinking Water Regulations (40 CFR 141).

E. QUALITY ASSURANCE:

The tasks in this work assignment do not require environmental measurements. Consistent with the Agency's quality assurance (QA) requirements, the contractor does not need to supplement the Contract Level Quality Assurance Project Plan (QAPP) or to prepare a Project-Specific Quality Assurance project Plan (SQAPP). The project specific QA requirements must be addressed in the monthly progress reports as specified under Task 0, below.

F. TASK DESCRIPTION:

Task 0: Work Plan and Monthly Progress Reports

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which the staffing plan and budget are based, and qualifications of proposed staff. In addition, the workplan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. If a subcontractor(s) is proposed, the contractor shall include information on plans to manage work and control costs.

The contractor shall prepare a statement indicating that this WA is a continuation of WA 0-14, 1-14, 2-14, 3-14, and 4-14. This task includes written monthly progress, verbal updates and financial reports. The monthly progress report shall summarize activities conducted for the reporting period, and whether significant issues, including Quality Assurance, have been identified and how they are being resolved. The contractor shall update WACOR, alt WACOR and TSC team on their progress when requested by WACOR/alt WACOR, generally during a biweekly conference call. The contractor shall record decisions, actions and outstanding issues made during the meeting for delivery to WACOR. Monthly financial reports must include a table with the invoice LOE and costs broken out by the tasks in this WA. Work on these tasks cannot proceed until the contractor receives the EPA CL COR's notification of approval.

Deliverables: Work plan and monthly progress and financial reports submitted in accordance with contract requirements. Record of decisions, actions and outstanding issues made during ad hoc conference calls.

Task 1: Certification Officer Training Course

The contractor shall support development and implementation of the technical and administrative services that will include development of course material, course logistics, administration and documentation as directed by the WACOR.

Personnel qualifications for the contractor shall include a mix of skills such as: working knowledge of chemistry and microbiology methods and quality control requirements for laboratories analyzing compliance drinking water samples.

Deliverables: Technical documents.

Task 2: Regional Laboratory Certification Program Assessments (RLCPA)

The contractor shall issue, retrieve and analyze the RLCPA checklists and annual questionnaires (AQs). The contractor shall use information from the RLCPA checklists and AQs to inform the EPA Regions of findings, recommendations and management

responsibilities for successful drinking water laboratory oversight. The contractor shall distribute the information with a variety of media including, but not limited to, EPA-formatted documents, SharePoint and on-site observations and discussions. The contractor shall administer the RLCAs for three EPA Regions. Dates for the on-site assessments are to be determined for a time convenient for TSC and each Region. The contractor shall conduct file review and take notes during the interviews conducted during on-site trip. The contractor shall prepare a draft report.

Personnel qualifications for the contractor shall include a mix of skills such as: extensive familiarity with State Certification Programs; and database skills for inputting elements and use for tracking future RLCAs. Travel for 1 person each to the following EPA Regional facilities is anticipated for this task:

Region 1: North Chelmsford, MA

Region 3: Fort Meade, MD

Region 5: Chicago, IL

Deliverables: Pre-populated RLCA checklists and final checklists, notes from the on-site visit, draft and final reports with corrective actions for each Region. Well maintained, functional and user-friendly SharePoint site. Electronic tracking system for managing RLCA checklists and AQs.

Task 3: Administrative support.

The contractor shall compile and distribute agendas, communicate meeting logistics, record meeting minutes and perform pertinent fact-finding to resolve regional issues. The contractor shall notify all participants of an agreeable date, time and call-in number. The contractor shall take minutes for 3 kinds of meetings: 1) monthly meetings with TSC (contractor/TSC minutes); 2) TSC meetings at a frequency between 2 and 4 per month (TSC-only minutes); and 3) monthly TSC/Regional Teleconference (monthly minutes). The contractor shall email the draft minutes from all meetings simultaneously to all TSC Lab Cert Team Members.

Personnel qualifications for the contractor shall include a mix of skills such as: meeting organization, good communication, note recording and knowledge of standard operating procedures for certification programs. No travel is anticipated for this task.

Deliverables: Meeting agendas and minutes.

Task 4: Revision of the Manual for the Certification of Laboratories Analyzing Drinking Water

The contractor shall edit the current expanded outline for logical organization and format the word document into a multi-level arrangement to which text additions easily can be made. The contractor shall divide the expanded outline into sections for distribution to subject matter experts for completing the manual information. The contractor shall re-compile the sections

into one document with a similar writing style throughout. The contractor shall distribute the document for peer review and ensure tracked changes are clearly identified for TSC review. The contractor shall facilitate the revision process by maintaining, documenting, distributing and receiving the latest versions of each section.

Personnel qualifications for the contractor shall include a mix of skills such as: extensive experience with technical editing, good communication, and excellent organization skills.

Deliverables: Draft and Final word documents to create a 6th edition of the manual. 508 compliant pdf for publication.

G. SCHEDULE OF DELIVERABLES:

Task	Deliverable	Due EPA	# Copies/Medium
0	Work Plan	Per contract.	One copy via email
0	Monthly progress and financial reports	Per contract.	One copy via email
0	Record of decisions, actions and outstanding issues made during ad hoc conference calls, approximately bi-weekly	7 days after conference call	One copy via email
Task	Deliverable	Due EPA	# Copies/Medium
2	Tracking system for managing RLCPA checklists and AQs.	Upon EPA technical direction.	Software system
2	Summary of pertinent information from the annual questionnaire, previous RLCPA reports and pre-populated checklist.	15 working days prior to the Regional on-site RLCPA.	One copy via email
2	Final checklists, notes from the on-site visit, and draft report.	Within 15 working days after the Regional on-site RLCPA.	One copy via email
2	Compile Annual Questionnaire response from the Regions into 1 report.	Upon EPA technical direction.	One copy via email

3	Meeting agendas and minutes.	Draft agenda to TSC before TSC preparatory meeting. Agendas at least 2 days before the meeting. Minutes within 7 days of the meeting.	One copy via email
3	Meeting Work Products	Upon EPA technical direction	One copy via email
4	Well organized and formatted expanded outline	5/31/2017	Electronic Word document
4	Individual chapters separated and ready for pertinent subject matter experts' input	10 working days after receipt of the word document from EPA	13 Chapters in Word and Appendices that are publication-ready.
4	Technical editing for consistent style, organization and completeness of content.	60 days after receipt of chapters from EPA	Draft document ready for peer review.
Task	Deliverable	Due EPA	# Copies/Medium
	Distribution of pertinent chapters to Peer reviewers including states and EPA regions	30 days after receipt of document from EPA	Emails with draft documents attached and 30 day deadline noted for review
4	Compiled comments and suggested incorporation, or not	30 days after peer-review deadline	Electronic document for final review
4	508 compliance and document number		

H. LEVEL OF EFFORT ESTIMATES: EPA estimates that 2500 professional hours will be required to complete the tasks outlined in this Performance Work Statement.

I. CONFERENCE/MEETING GUIDELINES AND LIMITATIONS:

The contractor shall immediately notify the EPA Contracting Officer, CL COR and WA COR of any anticipated event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.

J. TRAVEL: Travel for 1 person to EPA Regional facilities in North Chelmsford, MA, Chicago, IL, and Ft. Meade, MD is anticipated for Task 2.

K. SPECIAL REPORTING REQUIREMENTS: The contractor will update WACOR, alt WACOR and TSC team on their progress when requested by WACOR/alt WACOR, generally during a biweekly conference call. The contractor shall record decisions, actions and outstanding issues made during the meeting for delivery to WACOR.

L. QUALITY ASSURANCE SURVEILLANCE PLAN: Per Contract requirements, the tasks in this work assignment do not require environmental measurements. Consistent with the Agency's quality assurance (QA) requirements, the contractor does not need to supplement the Contract Level Quality Assurance Project Plan (QAPP) or to prepare a Project-Specific Quality Assurance project Plan (SQAPP).

EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment						Work Assignment Number 5-16				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-C-12-023			Contract Period 11/01/2012 To 04/30/2018 Base Option Period Number 5			Title of Work Assignment/SF Site Name Microbial Disinfect. ByProduct				
Contractor CADMUS GROUP, INC., THE					Specify Section and paragraph of Contract SOW Sections: 1.1, 2.1 and 3.1					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance From 05/01/2017 To 04/30/2018					
Comments: Initial work assignment issuance to Option Period 5.										
<input type="checkbox"/> Superfund Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
SFO <input type="checkbox"/> Note: To report additional accounting and appropriations date use EPA Form 1900-69A. (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE: 0				
11/01/2012 To 04/30/2018										
This Action:						6,720				
Total:						6,720				
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee			LOE:			
Cumulative Approved:				Cost/Fee			LOE:			
Work Assignment Manager Name Lili Wang <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>							Branch/Mail Code: Phone Number: 202-564-9641 FAX Number: 202-564-3767			
Project Officer Name Ronald Coleman <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>							Branch/Mail Code: Phone Number: 202-564-8491 FAX Number:			
Other Agency Official Name Erin Ridder <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>							Branch/Mail Code: Phone Number: 513-487-2155 FAX Number:			
Contracting Official Name Sandra Stargardt-Licis <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>							Branch/Mail Code: Phone Number: 513-487-2006 FAX Number:			

**PERFORMANCE WORK STATEMENT
CADMUS CONTRACT EP-C-12-023
WORK ASSIGNMENT 5-16**

A. TITLE: Microbial and Disinfectant Byproduct (MDBP) Data Collection and Analysis

B. PERIOD OF PERFORMANCE: May 1, 2017 through April 30, 2018

C. WORK ASSIGNMENT CONTRACTING OFFICER'S REPRESENTATIVE:

Lili Wang
Standards and Risk Reduction Branch
US EPA, Room 2209H
1200 Pennsylvania Ave., NW
Mail Code 4607M
Washington, DC 20460
Tel: (202) 564-9156
Fax: (202) 564-3767
E-mail: Wang.Lili@epa.gov

ALTERNATE WORK ASSIGNMENT CONTRACTING OFFICER'S REPRESENTATIVE:

Rich Weisman
Standards and Risk Reduction Branch
US EPA, Room 2209P
1200 Pennsylvania Ave., NW
Mail Code 4607M
Washington, DC 20460
Tel: (202) 564-2822
Fax: (202) 564-3767
E-mail: weisman.richard@epa.gov

D. BACKGROUND:

The 1996 Amendments to the Safe Drinking Water Act (SDWA) requires the U.S. Environmental Protection Agency (EPA) to review its existing drinking water regulations every six years. Section 1412(b)(9) of the SDWA states "The administrator shall, not less often than every 6 years, review and revise, as appropriate, each national primary drinking water regulation promulgated under this title. Any revision of a national primary drinking water regulation shall be promulgated in accordance with this section, except that each revision shall maintain, or provide for greater, protection of the health of persons."

Since the 1996 SDWA Amendments were enacted, EPA has completed three comprehensive reviews of existing National Primary Drinking Water Regulations (NPDWRs): Six-Year Review 1 (completed in July 2003), Six-Year Review 2 (completed in March 2010), and Six-Year Review 3 (completed in December 2016). Under the Six-Year Review 1, the Agency reviewed 69 NPDWRs and identified the Total Coliform Rule for revision. Under the Six-Year Review 2, the Agency

reviewed 71 NPDWRs and identified four chemical NPDWRs for revision (acrylamide, epichlorohydrin, tetrachloroethylene, and trichloroethylene).

Under the recently completed Six-Year Review 3, the Agency reviewed 76 NPDWRs and identified eight microbial and disinfection byproduct (MDBP) NPDWRs as candidates for revision (chlorite, *Cryptosporidium*, *Giardia lamblia*, haloacetic acids (HAA5), Heterotrophic Bacteria, *Legionella*, total trihalomethanes (TTHMs), and viruses). The requirements for chlorite, HAA5, and TTHMs are included within the Stage 1 and Stage 2 Disinfectants and Disinfection Byproduct Rules (D/DBPRs). The requirements for *Cryptosporidium*, *Giardia lamblia*, heterotrophic bacteria, *Legionella*, and viruses are included within the Surface Water Treatment Rules (SWTRs) (including the Surface Water Treatment Rule (SWTR), the Interim Enhanced Surface Water Treatment Rule, and the Long Term 1 Enhanced Surface Water Treatment Rule).

Following completion of the Six-Year Review 3, EPA plans to further assemble and analyze scientific data/information regarding health effects, epidemiology, toxicology, occurrence, analytical methods, treatment and other risk mitigation measures, and implementation related issues to evaluate whether there are new or additional ways to estimate and manage risk from MDBPs that will maintain or strengthen public health protection, while potentially easing implementation.

Under this work assignment, EPA is seeking continued support, as a follow-on to work assignment 4-16, for its effort pertaining to MDBP data collection and analysis. In addition, this work assignment will support the Agency's effort related to hazard management, project coordination, Six-Year Review-related activities (e.g., public comments), and Long-Term 2 Enhanced Surface Water Treatment Rule (LT2) implementation issues. Potential outputs from this work assignment may include issue papers, summary documents and other written materials on health effects, occurrence, treatment, implementation, and holistic approaches to drinking water protection.

E. QUALITY ASSURANCE:

Tasks 2 through 7 in this work assignment require the use of secondary data. Collection, use and analysis of data will be identical to the procedures described in the Supplemental Project Specific Quality Assurance Project Plan (SQAPP) and its addendum completed and approved by EPA for Work Assignment 3-16 (see cross-reference table below). This is consistent with the Agency's Quality Assurance (QA) requirements. In the monthly progress report, the Contractor shall address the QA requirements outlined under Task 0, below.

Cross-Reference of Tasks in WA 5-16 vs. WA 3-16 with Identical QA Procedures

Task Number in WA 5-16	Task Subject in WA 5-16	Applicable Tasks in WA 3-16 SQAPP with Identical QA Procedure
2	Microbial Contaminants Data Collection and Analysis	2, 4, 5, 6, Addendum
3	DBP Data Collection and Analysis	1, 2, 5, 6, 7, Addendum
4	Six Year Review-Related Activities	6
5	Project Coordination Activities	9
6	Hazard Management Document Support	9
7	LT2 Support	11

F. TASK DESCRIPTION:

Task 0: Work Plan and Monthly Progress Reports

The Contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the Contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. In addition, the work plan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables to be made publicly available be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the Contractor shall include information on plans to manage work and contract costs.

In addition, the contractor shall prepare a statement indicating that this WA is a continuation of WA 4-11 and 4-16. The workplan shall explain that collection, use and analysis of data in this work assignment will be identical to the procedures described in the SQAPP completed under corresponding task(s) of WA 4-11 and 4-16. This task also includes monthly progress and financial reports. The monthly progress report shall summarize activities conducted for the reporting period, and in a separate QA section, whether significant QA issues have been identified and how they are being resolved. Monthly financial reports must include a table with the invoice LOE and costs broken out by the tasks in this WA. The contractor shall immediately notify the Contract Level COR (CL COR) and WA COR if any changes to the tasks involving the collection and analysis of the data occur and prepare a SQAPP supplementing the Contract Level (QAPP) accordingly. Work on these tasks cannot proceed until the contractor receives the EPA CL COR's notification of approval.

Deliverables:

- Work plan.
- Monthly progress and financial reports.

Task 1: Administrative, Analytical and Writing Support

As directed by the EPA WACOR, the Contractor shall provide administrative, analytical and writing support to help EPA fulfill its obligations regarding consultations, outreach, options selection, and other tasks as determined by EPA. The Contractor shall provide general support as identified by EPA including: developing fact sheets, presentation materials and visual aids, communication materials, and support documents; providing technical and copy editing services; supporting EPA docket management activities; and conducting literature searches and telephone inquiries. Technical and copy editing includes checking documents for technical accuracy, responding to all comments received from EPA (by incorporating changes into documents, or explaining why no action was taken), and ensuring consistency throughout documents.

Deliverables: as directed by the EPA WACOR,

- Consultation and outreach fact sheets, presentation materials and visual aids, communication materials, and support documents and analyses (estimated total of 4-6), as directed by the EPA WACOR.
- Additional interim (revised) drafts of any of the above documents, as directed by the EPA WACOR.
- Technical and copy editing reviews of documents, as identified by EPA.
- Up to two literature search summaries, as identified by EPA.

For the purpose of the cost estimate, EPA estimates Task 1 will require approximately 5% of the total technical LOE.

Task 2: Microbial Contaminants Data Collection and Analysis

The contractor shall support the data collection and analysis related to microbial contaminants regulated under the SWTRs and the development of related documents and reports. This will include analysis of data and information based on compliance monitoring data provided in the Six-Year Review 3 Information Collection Request (ICR) database and other data sources noted in the Six-Year Review 3 Technical Support Document for Microbial Contaminant Regulations, prepared under WA 4-16 and in the Federal Register Notice announcing the results of EPA's third Six-Year Review (82 FR 3518, January 11, 2017).

Types of support shall be several areas, including:

- Holistic approaches (e.g., Water Safety Plans, sanitary surveys) to drinking water protection through the evaluation of data and literature,
- Evaluating occurrence of regulated and unregulated waterborne pathogens of concern, indicators, disinfectant residuals and other water quality parameters,
- Identifying issues related to the management/operations of water systems to minimize contamination (e.g., storage facilities), and how to address them,

- Finalizing a white paper on storage facilities developed under a different work assignment, WA 4-11.
- Supporting the development of a draft Public Health Impacts of Deteriorating Distribution System Infrastructure document being developed under WA 4-11.
- Developing baseline conditions to be applied for economic analysis purposes, and
- Other general issues, such as emerging microbial contaminants.

The specific scope of review and analyses related to these data and information will be provided in technical directions from EPA. Documents shall be delivered in electronic MS Word, Excel and/or Power Point format. Final documents and reports shall be delivered in both Microsoft Word and PDF (508-compliant for materials to be released publicly) formats, as directed by the EPA WACOR.

Deliverables: as directed by the EPA WACOR,

- Draft analytical results.
- Final analytical results.
- Draft documents and reports.
- Final documents and reports.

For the purpose of the cost estimate, EPA estimates Task 2 will require approximately 40% of the total technical LOE.

Task 3: DBP Data Collection and Analysis

The contractor shall support the collection and analysis of data/information related to disinfectants and DBPs (regulated and unregulated) and the development of related documents and reports. This shall include analysis of data and information based on compliance monitoring data provided in the Six-Year Review 3 ICR database and other data sources noted in the Six-Year Review 3 Technical Support Document for Disinfectants/Disinfection Byproducts Rules, prepared under WA 4-16 and in the Federal Register Notice announcing the results of EPA's third Six-Year Review (82 FR 3518, January 11, 2017).

Types of support will be related to the following areas:

- Occurrence and exposure,
- Treatment and cost (e.g., precursor removal),
- Implementation issues,
- Chlorate,
- Nitrosamines, and
- Other general areas.

In addition, it shall include analysis of data for DBP-related parameters from the DBP ICR, Unregulated Contaminant Monitoring Rule (UCMR) 2, UCMR3, and UCMR4.

The specific scope of review and analyses related to disinfectants and DBPs will be identified in technical directions from EPA. For the purpose of the work plan, the contractor shall assume that these efforts will be tracked separately using a similar breakdown as the support types shown above. Documents shall be delivered in electronic MS Word, Excel and/or Power Point format. Final documents and reports shall be delivered in both Microsoft Word and PDF 508-compliant formats (for materials to be released publicly), as directed by the EPA WACOR.

Deliverables: as directed by the EPA WACOR,

- Draft analytical results
- Final analytical results
- Draft documents and reports
- Final documents and reports

For the purpose of the cost estimate, EPA estimates Task 3 will require approximately 30% of the total technical LOE.

Task 4: Six Year Review-Related Activities

The contractor shall support the review and evaluation of data and other materials related to the recently-completed Six-Year Review of NPDWRs and preparation and planning for a future Six-Year Review. This may include the review and summary of public comments received on the third Six-Year Review, initial efforts to prepare for the fourth SYR ICR, potential modification of the existing protocol, and coordination with other EPA offices. The specific scope of review and evaluation will be provided in a technical direction from EPA. Final documents and reports shall be delivered in both Microsoft Word and PDF 508-compliant formats (for materials to be released publicly), as directed by the EPA WACOR.

Deliverables: as directed by the EPA WACOR,

- Draft comment summary.
- Final comment summary.
- Draft input for SYR4 planning.
- Final input for SYR4 planning.

For the purpose of the cost estimate, EPA estimates Task 4 will require approximately 5% of the total technical LOE.

Task 5: Project Coordination Support

Under this task, the contractor shall provide support for the project coordination, including, but not limited to, the planning and facilitation of public meetings/technical workshops related to the MDBP data collection and analysis, editorial review of a meeting announcement (e.g. FRN), preparation of a meeting summary and other support activities. Another related effort is to develop a summary report of current regulatory requirements of the MDBP rules for potential streamlining and consolidating the rule requirements, as needed.

For the purpose of the work plan, the contractor shall assume that there will be one public meeting. The public meeting will be similar in nature to the one held under the LT2 or RTCR efforts, or the one for the *Legionella* document under WA 4-16, Task 6. The meeting announcement will be approximately the same length and style as the one for announcing the public meeting to provide comments on the Draft *Legionella* document (<https://www.regulations.gov/document?D=EPA-HQ-OW-2015-0595-0001>).

The specific nature and type of support will be identified in technical directions from the EPA WACOR. Final documents and reports shall be delivered in both Microsoft Word and PDF 508-compliant formats (for materials to be released publicly), as directed by the EPA WACOR.

Deliverables: as directed by the EPA WACOR,

- Draft report outline.
- Draft report (initial and revised).
- Final report.

For the purpose of the cost estimate, EPA estimates Task 5 will require 5% of the total technical LOE.

Task 6: Hazard Management Document Support

Under this task, the contractor shall support the development of a document which will provide an overview of the state-of-knowledge on concepts and application of hazard management processes, including case studies, through the finished drinking water treatment and delivery process (e.g. from source to tap). This document will build upon the existing EPA white paper: *"Hazard Analysis Critical Control Point (HACCP) Strategies for Distribution System Monitoring, Hazard Assessment and Control"*, developed by the contractor under USEPA Contract No. 68-C-02-042, WA 2-06. The contractor shall also consider information compiled in another document: *"Technologies for Legionella Control in Premise Plumbing Systems: Scientific Literature Review"*, developed under USEPA Contract No. EP-C-12-023, WA 4-16 and available at: https://www.epa.gov/sites/production/files/2016-09/documents/legionella_document_master_september_2016_final.pdf. Another key reference is the *"Water Safety Plan Manual"* developed by the World Health Organization,

which is available at:

http://apps.who.int/iris/bitstream/10665/75141/2/9789241562638_eng_print.pdf.

The document to be developed under this task shall describe the use of hazard management (e.g. HACCP, Water Safety Plan, Water Management Plan) approaches from the water source through the consumers' tap (e.g. premise plumbing) for control of potential drinking water contaminants of interest (physical, chemical, and microbial). Under this task the contractor shall also develop fact sheets, presentations and other communication materials related to this document, as directed by the EPA WACOR.

The contractor shall use the outline approved by EPA under WA 4-16 to develop the initial draft, revised draft, and final document. Similarly, the contractor shall provide the initial draft, revised draft, and final document for any other documents (e.g. fact sheets, presentations, etc.) to be developed under this task. Final documents and reports shall be delivered in both Microsoft Word and PDF 508-compliant formats (for materials to be released publicly), as directed by the EPA WACOR.

Deliverables: as directed by the EPA WACOR,

- Draft documents (initial and revised).
- Final documents.

For the purpose of the cost estimate, EPA estimates Task 6 will require approximately 10% of the total technical LOE.

Task 7: LT2 Support

Under this task, the Contractor shall conduct analyses as needed to assess potential alternative risk management strategies for uncovered finished water reservoirs. These approaches would focus on risk management strategies that would provide equal or greater public health protection compared to the current cover/treat requirements, along with potential reductions to the implementation burden. The contractor shall develop an issue paper to summarize the analyses. Final documents and reports shall be delivered in both Microsoft Word and PDF 508-compliant formats (for materials to be released publicly), as directed by the EPA WACOR.

Deliverables: as directed by the EPA WACOR,

- Draft outline.
- Draft issue paper (initial and revised).
- Final issue paper.

For the purpose of the cost estimate, EPA estimates Task 7 will require approximately 5% of the total technical LOE.

G. SCHEDULE OF DELIVERABLES:

Deliverable format: The Contractor shall develop and deliver all documents and/or deliverables in Microsoft Office and/or Adobe Acrobat compatible PDF format unless noted otherwise.

508 compliance: The contractor shall ensure that all 508 compliant documents developed in this task and in all tasks outlined in this work assignment will align with EPA's 508 compliance checks (e.g., keywords, titles, tables, and tags). The contractor is responsible for maintaining and using the same version of Adobe as the EPA for purposes of developing and maintaining 508 compliant documents. To the extent practical, documents which are developed for this work assignment, and are to be 508 compliant, should be designed to be such from their inception, minimizing the effort for conversion and maximizing 508 compliance quality assurance.

Task	Deliverable	Subject to QA (Y/N)	Due to EPA	No. of Copies
0	Workplan, schedule, staffing plan and LOE estimates for each task	N	In accordance with contract requirements	In accordance with contract requirements
0	Monthly progress and financial reports	N	In accordance with contract requirements	In accordance with contract requirements
0	Weekly or Biweekly telephone or email status reports	N	Weekly/Biweekly each month; starting on the first week of the WA	1 electronic copy, as applicable to the EPA WACOR
1	Fact sheets, presentation materials and visual aids, communications materials, and support documents and analyses (4-6 total) – draft	N	Within 2 weeks of EPA directing Contractor, unless otherwise directed.	1 electronic copy to the EPA WACOR
1	Fact sheets, presentation materials and visual aids, communications materials, and support documents	N	Within 1 week of EPA providing comments on the initial draft(s), unless otherwise directed.	1 electronic copy to the EPA WACOR

Task	Deliverable	Subject to QA (Y/N)	Due to EPA	No. of Copies
	and analyses (4-6 total) – revised draft			
1	Technical and copy editing reviews of documents	N	Within 1 week of EPA directing Contractor, unless otherwise directed.	1 electronic copy to the EPA WACOR
1	Literature search summaries	N	Within 1 week of EPA directing Contractor, unless otherwise directed.	1 electronic copy to the EPA WACOR
2	Draft analytical results	Y	Within 2 weeks of EPA directing Contractor, unless otherwise directed.	1 electronic copy to the EPA WACOR
2	Final analytical results	Y	Within 1 week of EPA providing comments to Contractor, unless otherwise directed.	1 electronic copy to the EPA WACOR
2	Draft reports (per document)	Y	Within 2 weeks of EPA directing Contractor, unless otherwise directed.	1 electronic copy to the EPA WACOR
2	Final reports (per document)	Y	Within 2 weeks of EPA providing comments to Contractor, unless otherwise directed. No later than 45 days before April 30, 2018.	1 electronic copy to the EPA WACOR
3	Draft analytical results	Y	Within 2 weeks of EPA directing Contractor, unless otherwise directed.	1 electronic copy to the EPA WACOR
3	Final analytical results	Y	Within 1 week of EPA providing comments to Contractor, unless otherwise directed.	1 electronic copy to the EPA WACOR
3	Draft reports (per document)	Y	Within 2 weeks of EPA directing Contractor, unless otherwise directed.	1 electronic copy to the EPA WACOR
3	Final reports (per document)	Y	Within 2 weeks of EPA providing comments to the Contractor, unless otherwise directed. No later than 45 days before April 30, 2018.	1 electronic copy to the EPA WACOR
4	Draft comment summary	Y	Within 1 week of EPA directing Contractor, unless otherwise directed.	1 electronic copy to the EPA WACOR

Task	Deliverable	Subject to QA (Y/N)	Due to EPA	No. of Copies
4	Final comment summary	Y	Within 2 weeks of EPA providing comments to Contractor, unless otherwise directed.	1 electronic copy to the EPA WACOR
4	Draft input to SYR4	N	Within 1 week of EPA directing Contractor, unless otherwise directed.	1 electronic copy to the EPA WACOR
4	Final input to SYR4	N	Within 2 weeks of EPA providing comments to Contractor, unless otherwise directed.	1 electronic copy to the EPA WACOR
5	Draft outline	Y	Within 1 week of EPA directing Contractor, unless otherwise directed.	1 electronic copy to the EPA WACOR
5	Draft report	Y	Within 2 week of EPA directing Contractor, unless otherwise directed.	1 electronic copy to the EPA WACOR
5	Revised draft report	Y	Within 3 weeks of EPA providing comments to Contractor, unless otherwise directed.	1 electronic copy to the EPA WACOR
5	Final report	Y	Within 2 weeks of EPA providing comments to Contractor, unless otherwise directed. No later than 45 days before April 30, 2018.	1 electronic copy to the EPA WACOR
6	Draft report	Y	By September 30, 2017, unless otherwise directed.	1 electronic copy to the EPA WACOR
6	Revised draft report	Y	Within 3 weeks of EPA providing comments to Contractor, unless otherwise directed.	1 electronic copy to the EPA WACOR
6	Final report	Y	Within 2 weeks of EPA providing comments to Contractor, unless otherwise directed. No later than 45 days before April 30, 2018.	1 electronic copy to the EPA WACOR
7	Draft outline	Y	Within 1 week of EPA directing Contractor, unless otherwise directed.	1 electronic copy to the EPA WACOR
7	Draft issue paper	Y	Within 2 weeks of EPA directing Contractor, unless otherwise directed.	1 electronic copy to the EPA WACOR

Task	Deliverable	Subject to QA (Y/N)	Due to EPA	No. of Copies
7	Revised draft issue paper	Y	Within 3 weeks of EPA providing comments to Contractor, unless otherwise directed.	1 electronic copy to the EPA WACOR
7	Final issue paper	Y	Within 2 weeks of EPA providing comments to Contractor, unless otherwise directed. No later than 45 days before April 30, 2018.	1 electronic copy to the EPA WACOR

H. LEVEL OF EFFORT ESTIMATES:

EPA estimates that 6720 professional hours will be required to complete the tasks outlined in this Performance Work Statement.

For the purposes of the cost estimate, the contractor shall assume the following distribution of LOE for technical efforts across the tasks:

Task Number	Task Subject in WA 5-16	Percent of WA 5-16 Total LOE
1	Admin, Analytical and Writing Support	5%
2	Microbial Contaminants Data Collection and Analysis	40%
3	DBP Data Collection and Analysis	30%
4	Six Year Review-Related Activities	5%
5	Project Coordination Activities	5%
6	Hazard Management Document Support	10%
7	LT2 Support	5%
	Total	100%

I. CONFERENCE/MEETING GUIDELINES AND LIMITATIONS:

The contractor shall immediately notify the EPA Contracting Officer, CL COR and WACOR of any anticipated event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.

J. TRAVEL:

Only local travel is expected from the Contractor to support the work outlined in this work assignment.

K. SPECIAL REPORTING REQUIREMENTS:

The Contractor shall provide status updates for each task on a weekly or bi-weekly basis, either through a meeting with the EPA WACOR or over the telephone or email.

L. QUALITY ASSURANCE SURVEILLANCE PLAN:

Per contract requirements.

EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment						Work Assignment Number 5-17				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-C-12-023			Contract Period 11/01/2012 To 04/30/2018 Base Option Period Number 5			Title of Work Assignment/SF Site Name Pharmaceuticals in DW Wrkgrp				
Contractor CADMUS GROUP, INC., THE					Specify Section and paragraph of Contract SOW Section 1.6 and 1.7					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval						Period of Performance From 05/01/2017 To 04/30/2018				
Comments: Initial work assignment issuance to Option Period 5.										
<input type="checkbox"/> Superfund Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
SFO <input type="checkbox"/> Note: To report additional accounting and appropriations date use EPA Form 1900-69A. (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE: 0				
11/01/2012 To 04/30/2018										
This Action:						470				
Total:						470				
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee			LOE:			
Cumulative Approved:				Cost/Fee			LOE:			
Work Assignment Manager Name Shamima Akhter							Branch/Mail Code:			
_____ (Signature) (Date)							Phone Number: 202-566-1341			
							FAX Number:			
Project Officer Name Ronald Coleman							Branch/Mail Code:			
_____ (Signature) (Date)							Phone Number: 202-564-8491			
							FAX Number:			
Other Agency Official Name Jamie Strong							Branch/Mail Code:			
_____ (Signature) (Date)							Phone Number: 703-347-8638			
							FAX Number:			
Contracting Official Name Sandra Stargardt-Licis							Branch/Mail Code:			
_____ (Signature) (Date)							Phone Number: 513-487-2006			
							FAX Number:			

PERFORMANCE WORK STATEMENT
Cadmus Contract EP-C-12-023
Work Assignment # 5-17

A. TITLE: Developing Prioritization Approaches for Pharmaceuticals and Supporting the Interagency Pharmaceuticals in Water (PIW) Workgroup

B. Period of Performance: Effective Date through May 1, 2017 through April 30, 2018

C. Work Assignment Contracting Officer's Representative (WACOR)

Shamima Akhter
Office of Science and Technology, MC 4304T
1200 Pennsylvania Ave., N.W.
Washington, DC 20460
Phone: (202) 566-1341
Email: akhter.shamima@epa.gov

Alternate Work Assignment Contracting Officer's Representative (AWACOR)

Jamie Strong
Office of Science and Technology, MC 4304T
1200 Pennsylvania Ave., N.W.
Washington, DC 20460
Telephone #: 202-566-0056
Email: strong.jamie@epa.gov

D. BACKGROUND

Pharmaceuticals have been discovered in this nation's ambient waters, wastewater, and drinking water at very low levels. The EPA has four (4) areas of focus to respond to this issue, including improving science through research, improving public understanding, identifying partnership opportunities, and taking regulatory action when appropriate. There are thousands of pharmaceuticals on the market today and still more that are approved periodically. This creates a challenge for the EPA since most of these compounds have limited environmentally relevant data or publically available health effects data. As such, the EPA must determine which of these contaminants or groups of contaminants, if any; potentially pose the greatest risks to public health safety.

To aid in accomplishing this, in December 2008, EPA sponsored a National Academy of Sciences workshop where experts were brought together to provide input on approaches to prioritization and risk assessment for pharmaceuticals. One of the many observations made by the experts was the need for the Agency to move away from the assessment of individual drinking water contaminants and begin to identify groups of contaminants to consider for regulatory determination. Additionally, in 2010, EPA Administrator Lisa Jackson published a new drinking water strategy for the EPA which includes four (4) goals. One of these goals is to address contaminants as groups rather than one at a time so that enhancement of drinking water protection can be achieved cost-effectively.

Due to continued interest in the potential risks to public health caused by the occurrence of pharmaceuticals in sources of drinking water and, in some cases, finished drinking water, four (4) federal agencies (including the EPA) signed a Memorandum of Understanding agreement which will improve coordination and collaboration on issues related to pharmaceuticals in water. Under this agreement, federal agencies will share scientific data and information and coordinate potential future research on the presence of pharmaceuticals in water, their sources and potential health effects. In addition, one of the main actions resulting from this agreement is development of a formal interagency workgroup comprised of representatives from the four participating federal agencies and other federal agencies with responsibilities to address issues related to the occurrence of pharmaceuticals in drinking water and sources of drinking water. The workgroup will provide a forum to exchange information on health effects (such as pharmaceutical biological activity and

toxicology) and occurrence (sources, fate and transport) of pharmaceuticals in drinking water as well as provide a way to facilitate interagency consultation on implications of research and analyses derived from shared information.

In previous efforts, the EPA worked toward developing a process for grouping pharmaceuticals that occur and are likely to occur in drinking water, surface water and other media at low concentrations based largely upon statistical analyses of occurrence data for pharmaceuticals that have been found in water and other media in the United States. These analyses include summary statistics that are useful to assist in prioritization of these compounds. As such, these analyses could also assist the federal interagency workgroup with its activities. This work assignment will continue work to prioritize pharmaceuticals and support activities, as they are defined, by the federal interagency workgroup.

Under work assignments #2-17 and #3-17, draft documents on the API universe and prioritization have been developed. This work assignment will provide a vehicle to finalize these documents. The information from these documents can potentially be used to prioritize monitoring activities, identify data gaps and focus research in support of the Office of Water's broader research coordination and strategy.

E. QUALITY ASSURANCE

Tasks 1 and 2 of this work assignment require the use of secondary data (i.e. existing data). Collection, use and analysis of data will be identical to the procedures described in the Supplemental Project Specific Quality Assurance Project Plan (SQAPP) completed under Section VI of WA 3-2-17, consistent with the Agency's Quality Assurance (QA) requirements, appending the Contract Level Quality Assurance Project Plan (QAPP). The project specific QA requirements must be addressed in the monthly progress reports as specified under Task 0, below.

F. TASK DESCRIPTION

Task 0 Prepare a work plan and Progress Reports

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. In addition, the workplan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and control costs.

In addition, the contractor shall prepare a statement indicating that this WA is a continuation of WA 4-17. The workplan shall explain that collection, use and analysis of data in this work assignment will be identical to the procedures described in the SQAPP completed under Section VI of WA 2-17 and 3-17. This task also includes monthly progress and financial reports. The monthly progress report shall summarize activities conducted for the reporting period, and in a separate QA section, whether significant QA issues have been identified and how they are being resolved. Monthly financial reports must include a table with the invoice LOE and costs broken out by the tasks in this WA. The contractor shall immediately notify the Contract Level (CL COR) and WA COR if any changes to the tasks involving the collection and analysis of the data occur and prepare a SQAPP supplementing the Contract Level (QAPP) accordingly. Work on these tasks cannot proceed until the contractor receives the EPA CL COR's notification of approval.

Work plan to EPA WACOR	Per Contract Requirements
Monthly Progress Reports	Per Contract Requirements

Task 1 Finalization of the Universe of APIs and Prioritization Approaches for Pharmaceuticals in Water

The contractor shall finalize work (initiated under GSA-10F-0105J and continued under WA 2-17) on a draft summary report that describes the process for building the universe of active pharmaceutical ingredients (APIs) in addition to describing various approaches for how these APIs can be prioritized for monitoring activities and other research needs.

The report shall also contain discussions for how to define priority API groups (including screening and prioritization approaches from peer-reviewed literature). The WACOR anticipates that the draft report will be completed in iterations (5–10). Therefore, the EPA WACOR anticipates providing comments for each report iteration, when completed. The contractor shall submit the draft report (iteratively) to the WACOR for a series of reviews to be conducted by EPA management and others (as required by management). Compliance with Section 508 will be required based upon EPA/OST managerial decisions regarding report distribution.

Draft iterative report(s)	Three (3) weeks following receipt of each set of comments from the WACOR - Complete
Final report	Four (4) weeks following receipt of final comments from the WACOR Five (5) weeks (if 508 compliance is required) following receipt of final comments from the WACOR

Task 2 Support to the Federal Interagency Pharmaceuticals in Water (PIW) Workgroup Activities

The contractor shall provide occurrence data and other information, as directed by the WACOR, to support the Pharmaceuticals in Water (PIW) workgroup. It is anticipated that the workgroup activities will require access to occurrence information, statistical analyses, and other data collected and reports produced as part of this task order and may require additional data analyses by the contractor. Current areas of support include: 1) the creation of life cycle assessment diagrams for the workgroup’s review and approval, 2) assistance to develop outreach material for the workgroup (including frequently asked questions (FAQs), and 3) maintaining the workgroup’s website. The scope of workgroup activities will encompass a broad range of topics related to pharmaceuticals in water that may be of interest to any subset of agencies on the workgroup. In addition, the contractor shall record and distribute minutes for each workgroup meeting, to capture workgroup meeting proceedings and decisions. It is anticipated that the workgroup will not meet more than once quarterly (3 or 4 times/year). The contractor shall submit a draft of the meeting proceedings to the WACOR for review. The WACOR shall provide comments to the contractor. The contractor shall finalize the meeting proceedings after incorporation of the WACOR’s review comments. Compliance with Section 508 will be required based upon EPA/OST managerial decisions regarding workgroup product distribution.

The contractor shall assume that 50% of the overall LOE hours will be required for the work outlined in this task.

Delivery of support material to workgroup	To be determined by WACOR and depends on extent of workgroup request
Draft meeting proceedings to the WACOR	1 week following workgroup meeting
Final meeting proceedings	1 week following receipt of comments from WACOR

G. SCHEDULE OF DELIVERABLES

<u>Task</u>	<u>Deliverable</u>	<u>Due to EPA</u>	<u># of Copies</u>
0	Work plan	Per Contract	Electronic
	Monthly Progress Reports	Per Contract	Electronic
1	Final report	4 weeks after comment receipt	1
2	Support material	TBD	1
	Meeting notes (draft)	1 week after meeting	1
	Final meeting notes	1 week after comment receipt	1

H. LEVEL OF EFFORT ESTIMATES

EPA estimates that 470 professional hours will be required to complete the tasks outlined in this Performance Work Statement.

I. CONFERENCE/MEETING GUIDELINES AND LIMITATIONS

The contractor shall immediately notify the EPA Contracting Officer, CL COR and WACOR of any anticipated event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.

J. TRAVEL

Travel shall include three trips to Washington, DC for various planning and workgroup meetings and review of the analyses and reports with the WACOR as described in the subtasks above.

K. SPECIAL REPORTING REQUIREMENTS

There are no special reporting requirements.

L. QUALITY ASSURANCE SURVEILLANCE PLAN

Per contract requirements.

EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment						Work Assignment Number 5-18				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-C-12-023			Contract Period 11/01/2012 To 04/30/2018 Base Option Period Number 5			Title of Work Assignment/SF Site Name Watershed Prioritization				
Contractor CADMUS GROUP, INC., THE					Specify Section and paragraph of Contract SOW Section 2.1.4, 2.3.1, 3.3, 3.1.8					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance From 05/01/2017 To 04/30/2018					
Comments: Initial work assignment issuance to Option 5.										
<input type="checkbox"/> Superfund Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
SFO <input type="checkbox"/> (Max 2) Note: To report additional accounting and appropriations date use EPA Form 1900-69A.										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE: 0				
11/01/2012 To 04/30/2018										
This Action:						1,030				
Total:						1,030				
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee			LOE:			
Cumulative Approved:				Cost/Fee			LOE:			
Work Assignment Manager Name Douglas Norton <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>							Branch/Mail Code: Phone Number: 202-566-1221 FAX Number:			
Project Officer Name Ronald Coleman <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>							Branch/Mail Code: Phone Number: 202-564-8491 FAX Number:			
Other Agency Official Name Erin Ridder <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>							Branch/Mail Code: Phone Number: 513-487-2155 FAX Number:			
Contracting Official Name Sandra Stargardt-Licis <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>							Branch/Mail Code: Phone Number: 513-487-2006 FAX Number:			

**PERFORMANCE WORK STATEMENT
CADMUS CONTRACT EP-C-12-023
WORK ASSIGNMENT 5-18**

A. TITLE: WATERSHED PRIORITIZATION ASSISTANCE

B. PERIOD OF PERFORMANCE: From effective date through April 30, 2018

C. WORK ASSIGNMENT COR:

DOUGLAS J. NORTON (4503T)
EPA Office of Water
1200 Pennsylvania Ave NW
Washington, DC 20460
norton.douglas@epa.gov
202-566-1221

ALTERNATE WORK ASSIGNMENT COR:

SHERA REEMS (4503T)
EPA Office of Water
1200 Pennsylvania Ave NW
Washington, DC 20460
reems.shera@epa.gov
202-566-1264

D. BACKGROUND: This Work Assignment will support EPA in assisting Recovery Potential Screening (RPS) and Healthy Watersheds (HW) efforts in states. Contractor-assisted RPS/HW support from EPA to states dates back to 2005 and has involved projects in many states during the past several years. Many additional projects in new states are anticipated during the coming years due to substantial increases in state priority-setting among watersheds as a state approach to impaired waters restoration and protection planning.

Recovery Potential Screening (RPS) is a technical assessment method for systematically comparing relative restorability among many different impaired waters or watersheds based on multi-metric indices drawn mostly from landscape and monitoring data. The screening is usually performed to identify more restorable waters that are good candidates for restoration investments. The RPS method can be customized to a wide variety of comparative assessment and decision support uses. Healthy Watersheds Assessment (HW) is very similar in that it also compares large numbers of watersheds most often across whole states, using GIS data and methods identical to RPS. Whereas analyzing healthy watersheds is one of many purposes to which RPS can be applied for watershed analysis and comparison, HW is more specific to watershed health in particular; the two projects are currently being integrated. HW assessments draw from the same indicator data as RPS and use the same analytical protocols, tools and QA/QC. RPS/HW is applicable for setting priorities among 303(d) listed waters in watersheds, determining the prioritized schedule of Total Maximum Daily Load (TMDL) development,

setting priorities for TMDL implementation, and developing other restoration strategies that can be optimized by careful consideration of restorability and its interplay with other factors. RPS/HW tools and data have already been utilized in 28 states and thoroughly documented in EPA websites (see www.epa.gov/rps, www.epa.gov/hwp and www.epa.gov/wsio). Among the recent uses of RPS/HW are prioritizing TMDL activities relative to the TMDL 10-year Vision implementation, including the assessment and protection of healthy watersheds.

Most RPS/HW projects are comprehensive, multi-purpose statewide efforts in which EPA and the contractor facilitate identification of the state's intended uses of RPS/HW, identify appropriate metrics, gather and measure data, demonstrate RPS/HW techniques in state workshops, and transfer RPS/HW tools and data products. Projects also can be more narrowly defined, as in the multi-state demonstration of RPS/HW as a general framework for watershed prioritization intended to encourage development and implementation of effective state strategies for managing nitrogen and phosphorus pollution. Either or both types of project may require support under this Work Assignment. Because RPS/HW services are widely in demand, it is also efficient to develop multi-state or even national data and tools rather than repeat data and tool development one state at a time. For this reason, the Work Assignment also contains national data, assessment and tool development support to augment single state projects and make them more efficient.

E. OBJECTIVE: The primary goal of this WA is to help EPA provide technical data, tools, and assistance to state water programs who need to systematically set priorities at a watershed level to guide their programs for best results. Below is a task list followed by descriptions of tasks under this Work Assignment that are designed to address this objective. Tasks 1, 2, and 3 constitute most of the level of effort, estimated by EPA as 20% Task 1, 30% Task 2 and 35% Task 3, with Tasks 0 and 4 as the remaining 5% and 10% of the level of effort, respectively. The contractor shall provide RPS/HW support to EPA as described in the Tasks below. All deliverables must be in an electronic format supportable by EPA at the end of the period of performance for this Work Assignment. No hardcopy products are requested.

F. QUALITY ASSURANCE:

Tasks 2 and 3 in this work assignment requires the use of **secondary** data. Collection, use and analysis of data will follow to the procedures described in the Supplemental Project Specific Quality Assurance Project Plan (SQAPP) completed under Task 0 during WA 2-18 and used without need of update throughout WA 3-18 and 4-18, consistent with the Agency's Quality Assurance (QA) requirements, and appending the Contract Level Quality Assurance Project Plan (QAPP). The project specific QA requirements must be addressed in the monthly progress reports as specified under Task 0, below. In a monthly progress report, the contractor shall provide a QA section to describe this work assignment compliance to the project-specific QAPP, what additional project-specific QA issues have occurred and how these have been addressed. Description of QA compliance must be provided in the final monthly report of this work assignment. WA 5-18 involves no changes in use of secondary data or methods and the existing SQAPP remains fully applicable for Option Period 5 efforts.

G. TASK DESCRIPTION:

TASK 0: Work Plan, SQAPP and Monthly Progress Reports (5% of effort)

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. In addition, the workplan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and control costs.

The contractor shall not develop a new SQAPP because the SQAPP developed in Option 2 is appropriate, because the task and nature of work for this WA continuation is virtually unchanged. Should any unexpected need to update the SQAPP arise during option year 4, the necessary update shall be described and issued through a work assignment amendment.

This task also includes monthly progress and financial reports. The monthly progress report shall summarize activities conducted for the reporting period, and in a separate QA section, whether significant QA issues have been identified and how they are being resolved. Monthly financial reports must include a table with the invoice LOE and costs broken out by the tasks in this WA. The contractor shall immediately notify the Contract Level COR (CLCOR) and WACOR if any changes to the tasks involving the collection and analysis of the data occur and prepare a new SQAPP supplementing the Contract Level QAPP accordingly.

Deliverables: Work plan, and monthly progress and financial reports

TASK 1: RPS/HW Project Kickoff, Webinars and Workshops (20% of effort)

The contractor shall support RPS/HW project initiation and workshop or webinar activities as generally described on the RPS website. Supporting a state RPS/HW project may involve conducting a workshop (onsite), a webinar (remote), and/or developing a screening analysis product (see also Task 3). It is the purpose of the kickoff scoping to determine the type of RPS/HW support to be provided and identify whether it will involve a workshop, a webinar, an analysis or a combination of these. Under this task, the contractor shall support kickoff scoping, webinars or workshops for up to 10 projects, including a maximum of 5 workshops.

Whereas EPA does not anticipate the contractor's support to any individual workshop incurring \$20,000 in cost, the contractor shall immediately notify the EPA Contracting Officer, Contract Level Contracting Officers Representative and Work Assignment Contracting Officer's Representative if it anticipates support to such event reaching this cost. Event expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for workshop preparation should be included, but the federal employee time for workshop preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s)

until authorized to do so by the Contracting Officer.

The EPA WACOR initiates kickoff scoping for each specific state or other client through written technical direction to the contractor. The Contractor then arranges and carries out project kickoff scoping to recommend an approach to the WACOR. The kickoff phase shall involve EPA, contractor and state participants in:

- One to two conference calls and supporting email dialogue to determine scope of the project;
- Development of scoping summary notes that identify the RPS/HW project purpose(s), topics and metrics of specific interest, and recommended support approach; and
- Follow-up communications with WACOR as needed to approve the approach.

In cases where an RPS/HW workshop is part of the recommended support approach, the contractor shall organize and support the workshops in the following manner:

- Coordinate optimum scheduling and state onsite facility arrangements;
- Prepare agenda, handouts and presentation materials;
- Arrange travel for one or two RPS/HW experts (one geospatial) to a state hosted location;
- Facilitate the workshop, including compiling possible RPS/HW applications of interest to the state, providing hands-on training, and identifying relevant recovery potential metrics, data, and screening products;
- Develop a meeting summary product and transfer contractor-generated materials to the WACOR and the state.

Workshops are not automatically always part of the RPS/HW support project assistance, such as when a state's request is simple and narrow in scope and the state possesses some expertise in watershed screening and comparison with RPS/HW or other tools. These types of support may be provided through conference calls and webinars. The contractor shall support webinar-assisted projects by:

- Hosting the webinar and communicating with participants about schedule and agenda;
- Developing any RPS/HW materials needed in advance of the webinar;
- Developing a webinar summary product and transferring contractor-generated materials to the WACOR and the state.

As all 50 states and larger river basins have recently been given the opportunity to receive RPS/HW support from EPA by the development of more universally available data and tools, the final list of the states to be supported under this task cannot be specified at this time. However, CO and AL have already requested support, and kickoff scoping on each of these will be able to determine the specific type of support and choose among workshops, webinars and analytical projects as the appropriate method. More state and river basin requests are to be expected and will be communicated to the contractor through written technical direction from the WACOR. WA 5-18 specifically adds workshop/webinar and other support to more state projects involving IA, KS, and PA to the states mentioned above, but does not materially change the scope of work. Additional state-specific or multi-state projects (e.g., involving interstate collaboration on a common river basin or other area of joint concern) may be required. The specific states and/or multi-state river basins to which this support is directed will be communicated to the contractor through written technical direction.

Deliverables: Project kickoff scoping, workshop/webinar prep materials, workshop/webinar summary materials

TASK 2: Recovery Potential Metrics Compilation (30% of effort)

The primary form of data used in RPS/HW support is indicator measurements on a watershed basis, and thus compiling and analyzing indicator values is central to every RPS/HW project. Basically, watershed indicators shall be compiled on a project-specific (e.g., state-specific) scale or, where nationally consistent data sources are available, on a national scale to cover numerous states' watersheds with maximum efficiency. Both approaches are covered under this Task.

EPA has developed a Watershed Index (WSI) and national library of watershed indicators that provide a major source of indicators for RPS/HW projects on individual states or other areas. The contractor shall develop and nationally measure up to 100 additional indicators for addition to the WSI indicator data. Each indicator will be either assigned by the WACOR, or recommended by the contractor and approved by the WACOR, in written technical direction. Compilation of each indicator shall involve development of EPA's required metadata documentation, as well as related information routinely compiled in the WSI indicator tables.

On a project-specific level, the contractor shall also compile indicators for use in RPS/HW projects. Many indicators shall come from the WSI with no additional processing needed, but others will be available only from state and affiliated sources and will require additional compilation effort to be brought into the same format as the WSI indicators for RPS/HW usage. The total number of project-specific indicator additions cannot be predicted with certainty at this time, but may average around 20 indicators per project.

In both national-scale and state-scale activities under this task, the contractor shall ensure that the compiled indicator data are processed into and/or compatible with the local RPS/HW tools as well as online RPS/HW tools that will be utilized in the screening analyses.

Deliverables: Nationally measured indicator data, project-specific data and tools, documentation

TASK 3: RPS/HW Analysis and Tech Transfer Support (35% of effort)

Most RPS/HW support is expected to involve some degree of contractor screening analysis as expert assistance to the state. The most common type of project is likely to be a statewide screening and comparison of watersheds, based on a specific theme of interest (e.g., a common pollutant of concern; a set of watersheds of specific value or interest; a set of restoration or healthy watersheds protection options in need of a strategy and priority order). This task is likely to involve the highest level of effort among this WA's tasks.

Task 3 follows naturally from Task 1's kickoff scoping component when the scoping reveals the state needs a specific form of RPS/HW analysis and its products in support of its watershed planning and prioritization needs. In some cases, the kickoff scoping may determine that the state wishes to do all its analysis unassisted and would prefer only data and a workshop or webinar on its basic usage. In most cases, however, states are expected to want and need expert analytical help from EPA and the contractor shall provide this help in the form of technical products of the screening projects carried out under this task. Task 3 support products may include a workshop or webinar, or may be carried out without either – as determined by the kickoff scoping and subsequent discussions between the states and the WACOR. See Task 1 for more about the scoping, webinars, or workshops and specific states named.

The EPA WACOR initiates an RPS/HW analysis project for a specific state or other client through written technical direction to the contractor. The contractor shall then design a summary of the approach to be taken to the analysis, and validates this with the WACOR and the state participants. The contractor shall then carry out the analysis involving the RPS scoring tool or equivalent tool, and shall generate a state custom RPS tool and deliver RPS/HW tool copies of specific screening runs that are completed. The contractor shall also generate individual maps, rank-ordered tables, and bubble plot graphics as visual byproducts of the screening analyses. Ultimately, each project should yield analytical results that meet the state's request, and these results shall be summarized by the contractor in a brief summary document that can be transmitted to EPA and the state requestor. Upon project completion, the contractor shall organize and transmit the project summary, RPS/HW tool files, and related visuals to the EPA WACOR and the requestor.

Assistance projects may vary in size as approved by the WACOR, but are expected to generally involve 50 to 100 hours of effort to complete (not counting scoping, workshops or webinars, if also involved). A minimum of 5 RPS/HW support projects is expected under this task.

Deliverables: RPS/HW support project design, data files, descriptive summaries

TASK 4: Recovery Potential Tools and Methods Improvements (10% of effort)

This Task covers contractor support for specific RPS/HW tools/methods improvements authorized by the WACOR only through written Technical Direction. A variety of RPS/HW tools and information resources have been developed over the years to assist state RPS/HW users. Needs to revise and improve RPS/HW tools may arise from time to time, and whereas the need to update a tool or method can be anticipated, the specifics cannot be predicted in advance. Thus, this task describes the main areas of potential improvements at a general level of detail with clarifying details to be provided through Technical Direction that will clarify the details in one or more of the general topic areas discussed below:

A. Website revisions

The contractor shall support changes as required by the EPA WACOR to correct or improve website content or functionality, if user feedback to EPA reveals any such needs. The RPS/HW website and the WSIO website contain a variety of technical tools and data designed to help states assess and compare the restorability of their impaired waters. These resources include but are not limited to: screening methodology directions, recovery potential indicators lists, indicator reference sheets, a recovery literature database, results plotting tools, index calculation tools, screening project reports and papers, and links to related tools from other websites. If directed, the contractor shall develop content updates, replacements or additions to the website in formats that can be reviewed and approved by the EPA WACOR and then transferred to the EPA website by the WACOR or other qualified editor. Note that, since EPA's adoption of the Drupal content management system for its websites, the contractor shall potentially still support content development and delivery of web resources as described above, but will not be tasked to directly edit or modify the EPA website.

B. Tool enhancements

Example tools include the RPS/HW auto-scoring spreadsheet and ArcGIS (Geographic Information System) processing methods or tools developed for measuring RPS/HW indicators. If directed, the contractor shall improve the functionality of the recovery potential scoring spreadsheet, the results plotting program, or other existing or new RPS/HW tools that will help RPS/HW users calculate and display their own recovery potential screening results. The most likely assignment to anticipate under this task is to update the RPS/HW scoring spreadsheet tool.

C. Information resources improvements

Examples of RPS/HW information resources include recovery potential indicators, indicator reference sheets, and the Restoration and Recovery Literature Database (see website). The contractor shall continue adding to the content of existing and/or new indicators and their related indicator reference sheets if directed. The enhancements may include adding more bulletized excerpts from technical publications, measurement technique options for each indicator, and specific URL hot links to commonly available data sources. The contractor shall also incrementally add to the Restoration and Recovery Literature Database, by adding papers used and referenced in the indicator reference sheets; additional papers may be provided by the EPA WACOR or found by the contractor if requested by the WACOR through technical direction to search the technical literature and other sources. The most recent version of the Database shall be updated prior to the end of the WA project period.

D. Methodology improvements

The contractor shall revise and improve specific components of the screening methodology if directed. Examples of methodological components that may be selected for improvement are: brief written directions for correlation analysis among the indicators; a brief written approach for weighting indicators; a brief written account of statistical applications that could be used with screening results; and, other small methodological components that can be improved.

Deliverables: Updated RPS/HW tool versions and supporting documentation

H. SCHEDULE OF DELIVERABLES:

Task	Deliverable	Due to EPA	No of Copies/Medium
Task 0			
0.1	Work Plan	Per Contract requirements	Electronic file
0.2	Monthly Reports	Per contract requirements	Electronic file
Task 1			
1.1	Project kickoff scoping	<30 days of WACOR TD	Electronic file
1.2	Pre-workshop package	<30 days of scoping	Electronic file
1.3	Workshops (5) and webinars	As directed by the EPA WACOR	N/A
1.4	Workshop summary materials	<15 days after event	Electronic file
Task 2			
2.1	National indicator data/ metadata (30)	As directed by the EPA WACOR via TD	Electronic file
2.2	Project-specific data/ metadata (5)	As directed by the EPA WACOR via TD	Electronic file
Task 3			
3.1	Support projects (5) design	<30 days of WACOR TD	Electronic file
3.2	Support project summary	<90 days of WACOR TD	Electronic file
3.3	Support project tools and data	<90 days of WACOR TD	Electronic file
Task 4			
4.1	Updated RPS/HW tool file	As directed by the EPA WACOR via TD	Electronic file
4.2	Updated RPS/HW tool documentation	As directed by the EPA WACOR via TD	Electronic file

I. LEVEL OF EFFORT ESTIMATES:

EPA estimates that 1030 professional hours will be required to complete the tasks outlined in this Performance Work Statement.

J. CONFERENCE/MEETING GUIDELINES AND LIMITATIONS:

The contractor shall immediately notify the EPA Contracting Officer, Project Officer and Work Assignment Manager of any anticipated event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer. Contractor is not expected to approach or exceed this cost in routine RPS/HW workshops, which are small and of short duration.

K. TRAVEL: Contractor travel will be necessary in the completion of this WA's tasks. An estimated 8 person-trips averaging two nights each is anticipated.

For planning purposes these trips (some planned destinations may change) shall include:

Madison, WI to Washington DC (2)

Madison, WI to Atlanta GA (2)

Madison, WI to Denver CO (2)

Madison, WI to Shepherdstown, WV (2)

Madison, WI to Birmingham, AL (1)

Madison, WI to Kansas City, KS (1)

Travel to the destinations listed will require approval of the WACOR per contract requirements. If destinations change the contractor will be notified by the WACOR and new destinations provided as needed through written technical direction.

L. SPECIAL REPORTING REQUIREMENTS: N/A

M. QUALITY ASSURANCE SURVEILLANCE PLAN: Per Contract requirements

EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment						Work Assignment Number 5-19				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-C-12-023			Contract Period 11/01/2012 To 04/30/2018 Base Option Period Number 5			Title of Work Assignment/SF Site Name Health Effects Screening				
Contractor CADMUS GROUP, INC., THE					Specify Section and paragraph of Contract SOW Sections: 1.6 and 1.7					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance From 05/01/2017 To 04/30/2018					
Comments: Initial work assignment issuance to Option Period 5.										
<input type="checkbox"/> Superfund Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
SFO <input type="checkbox"/> (Max 2) Note: To report additional accounting and appropriations date use EPA Form 1900-69A.										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:		LOE:						
11/01/2012 To 04/30/2018				0						
This Action:				365						
Total:				365						
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee		LOE:				
Cumulative Approved:				Cost/Fee		LOE:				
Work Assignment Manager Name Shamima Akhter <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 202-566-1341 FAX Number:				
Project Officer Name Ronald Coleman <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 202-564-8491 FAX Number:				
Other Agency Official Name Erin Ridder <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 513-487-2155 FAX Number:				
Contracting Official Name Sandra Stargardt-Licis <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 513-487-2006 FAX Number:				

**PERFORMANCE WORK STATEMENT
CADMUS CONTRACT #EP-C-12-023
WORK ASSIGNMENT # 5 -19**

A. Title: Health Effects Screening Approaches and Human Health Benchmarks for Pharmaceuticals

B. Period of Performance: May 1, 2017 through April 30, 2018

C. Work Assignment Contracting Officer's Representative (WACOR)

Shamima Akhter
Office of Science and Technology, MC 4304T
1200 Pennsylvania Ave., N.W.
Washington, DC 20460
Phone: (202) 566-1341
Email: akhter.shamima@epa.gov

Alternate Work Assignment Contracting Officer's Representative (AWACOR)

Jamie Strong
Office of Science and Technology, MC 4304T
1200 Pennsylvania Ave., N.W.
Washington, DC 20460
Telephone #: 202-566-0056
Email: strong.jamie@epa.gov

D. BACKGROUND

Pharmaceuticals have been discovered in this nation's ambient waters, wastewater, and drinking water at very low levels. EPA has a strategy to respond to this issue, including improving science through research, improving public understanding, identifying partnership opportunities, and taking regulatory action when appropriate. There are thousands of pharmaceuticals on the market today and still more that are approved daily. This creates a challenge for the Agency since most of these compounds do not have environmentally relevant data or publically available health effects data. Therefore, as a part of our strategy, EPA is examining ways to screen a broad range of pharmaceuticals based upon health benchmark indicators, structure similarities, class of compound, etc.

In December 2008, EPA sponsored a National Academy of Sciences (NAS) workshop where experts were brought together to provide input on possible prioritization and risk assessment approaches for pharmaceuticals. This work assignment is follow-up work resulting from the workshop.

Also, due to continued interest in the potential risks to public health caused by the occurrence of pharmaceuticals in sources of drinking water and, in some cases, finished drinking water, four (4) Federal agencies (including the EPA) signed a Memorandum of Understanding agreement which will improve coordination and collaboration on issues related to pharmaceuticals in water. Under this agreement, Federal agencies will share scientific data and information and coordinate potential future research on the presence of pharmaceuticals in water, their sources and potential

health effects. In addition, one of the main actions resulting from this agreement is development of a formal interagency workgroup comprised of representatives from the four participating Federal agencies and other Federal agencies with responsibilities to address issues related to the occurrence of pharmaceuticals in drinking water and sources of drinking water. The workgroup will provide a forum to exchange information on health effects (such as pharmaceutical biological activity and toxicology) and occurrence (sources, fate and transport) of pharmaceuticals in drinking water as well as provide a way to facilitate interagency consultation on implications of research and analyses derived from shared information. Although the direction that the workgroup will take is uncertain, the analyses, reports and data collected under this work assignment could help to facilitate the path of the Federal interagency workgroup's activities. Therefore, the contractor should be prepared to support the EPA WACOR when necessary.

In a series of previous work assignments under a different contract vehicle (WA#1-03, 2-03 and 3-03 with Tox Services LLC), a draft paper was developed. During this current work assignment, the draft paper will be finalized and published (depending upon journal acceptance). It provides a vehicle to further develop and refine a process for screening pharmaceuticals based on health benchmark indicators and applying this process to four pilot groups of pharmaceuticals using health effects data from the Food and Drug Administration (FDA). This process should allow EPA to screen out as well as prioritize groups of compounds.

As part of this work, EPA has evaluated several screening/prioritization approaches and performed calculations of margin of exposure (MOE) values to compare to screening Reference doses (s-RfDs) and screening Maximum Recommended Safe Doses (s-MRSDs); compared these health measures to the third Contaminant Candidate List (CCL3) results for severity and potency attributes; and compared calculations (s-RfD, s-MRSD, MOE) for each of the 4 groups of drugs; and compared these results to other approaches from the peer-reviewed literature. As necessary, EPA will continue to investigate other prioritization approaches to develop a prioritization process for groups of compounds and include this information in the paper.

Based on EPA's evaluation of various prioritization approaches and health effects data for the 4 groups of drugs, it was determined that this data could be used to develop human health benchmarks that could aide in prioritizing groups of pharmaceuticals for research. Under WA#3-19, benchmarks for 22 pharmaceuticals were developed. Under this work assignment, the contractor shall develop human health benchmarks, based on health data from FDA, for a select group of pharmaceuticals (approximately 20) which have been found in water or selected as priority contaminants in water.

E. QUALITY ASSURANCE

Tasks 2, 3 and 4 of this work statement require the use of secondary data (i.e. existing data). Collection, use and analysis of data will be identical to the procedures described in the Supplemental Project Specific Quality Assurance Project Plan (SQAPP) completed under Task 0 of WA 2-19 and 3-19 consistent with the Agency's Quality Assurance (QA) requirements, appending the Contract Level Quality Assurance Project Plan (QAPP). The project specific QA requirements must be addressed in the monthly progress reports as specified under Task 0, below.

F. TASKS DESCRIPTION

Task 0 Prepare a work plan and Progress Reports

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. In addition, the workplan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and control costs.

In addition, the contractor shall prepare a statement indicating that this WA is a continuation of WA 4-19. The workplan shall explain that collection, use and analysis of data in this work assignment will be identical to the procedures described in the SQAPP completed under task 0 of WA 4-19. This task also includes monthly progress and financial reports. The monthly progress report shall summarize activities conducted for the reporting period, and in a separate QA section, whether significant QA issues have been identified and how they are being resolved. Monthly financial reports must include a table with the invoice LOE and costs` broken out by the tasks in this WA. The contractor shall immediately notify the Contract Level COR (CL COR) and WA COR if any changes to the tasks involving the collection and analysis of the data occur and prepare a SQAPP supplementing the Contract Level (QAPP] accordingly. Work on these tasks cannot proceed until the contractor receives the EPA CL COR's notification of approval.

Deliverables:

Work plan & monthly progress & financial reports submittal	In accordance with Contract requirements
--	--

Task 1 – Revisions to Final Draft Paper on Approaches to Screening (based on health effects)

After the receipt of comments on the draft paper from the EPA WACOR, the contractor shall revise the draft pharmaceutical paper based on the EPA WACOR's comments and submit the revised draft to the EPA WACOR for review. After receipt of the EPA WACOR's comments (if any), the contractor shall address these comments and submit the newly revised version to the EPA WACOR for a second review. If the EPA WACOR has no comments, this version will serve as the final paper. EPA's decision on distribution will determine if the contractor is required to develop a 506 compliant version of the final paper. For planning and resource estimate purposes, the contractor shall assume the need for a 508 compliant version.

Deliverables:

First revised draft paper	2 weeks following receipt of EPA WACOR's comments
Second revisions to draft (if any)	2 weeks following receipt of EPA WACOR's comments

Final paper

2 weeks following receipt of EPA
WACOR's comments
3 weeks if 508 compliance is required

Task 2 – Development of Human Health Benchmarks

The contractor shall analyze health data from pharmacology profiles supplied by FDA and other supplemental data from peer-reviewed journals and make recommendations to the EPA WACOR as to whether human health benchmarks can be developed from the data. (The EPA WACOR will provide literature searches for each chemical of peer reviewed journals to the contractor.) The contractor shall create a table that will include a breakdown (study type, # of animals, dose levels, study duration, No Observed Adverse Effect Level (NOAEL), Lowest Observed Adverse Effect Level (LOAEL) (if identified), other information relevant to the evaluation of the study) of each study included in the pharmacology profile and any peer-reviewed studies for each chemical and indicate whether the study would support development of a human health benchmark for that chemical. Upon completion, the contractor shall submit the table to the EPA WACOR.

The EPA WACOR shall review the table of information and discuss the findings with the contractor. At the EPA WACOR's direction, the contractor shall develop draft human health benchmarks for chemicals that have been determined to have adequate health data. The contractor shall carefully document (using a systematic narrative format) details of the criteria used to select the critical study, uncertainty factors, relative source contribution, and values such as, body weight and drinking water consumption rates. The contractor shall submit the draft benchmarks and the narratives to the EPA WACOR for comment. Following the EPA WACOR's review, the EPA WACOR shall submit the draft benchmarks and the narratives to the contractor for finalization.

For guidance, the contractor shall refer to the human health benchmarks home page (<http://iaspub.epa.gov/apex/pesticides/f?p=HHBP:home>) that EPA's Office of Water developed for pesticides. Using the fact sheet prepared for the human health benchmarks for pesticides as a reference, the contractor shall prepare a fact sheet for the human health benchmarks for pharmaceuticals (HHBPhs). An example of the fact sheet can also be found at <http://iaspub.epa.gov/apex/pesticides/f?p=HHBP:home>.

Deliverables:

Table of Studies to EPA WACOR
for review

2 weeks following analysis of pharmacology
profiles and receipt of literature search
results from the EPA WACOR

Discussion of Findings w/ EPA WACOR

1 week after delivery of the Table of Studies
to the EPA WACOR

Draft HHBPhs and documentation of
the development process

3 weeks following the discussion of findings
with the EPA WACOR

Finalization of benchmarks and narratives	2 weeks following receipt of EPA WACOR's comments
Draft Fact Sheet	1 week after finalization of benchmarks and narratives
Final Fact Sheet	1 week following receipt of EPA WACOR's comments

Task 3 – Publication of Paper

As directed by the EPA WACOR, once the paper has been finalized(in Task 1) and undergone an internal EPA/Office of Water review process, the contractor shall prepare the final paper for submission to peer reviewed journals (up to five (5), all determined by the EPA WACOR) and, if accepted, for journal publication. EPA will be responsible for any associated journal fees. The contractor shall prepare the document according to the respective journal's formatting and submission requirements. These requirements will be provided to the contractor by the EPA WACOR. If the paper is accepted for publication and if necessary, the EPA WACOR will provide review comments from the journal to the contractor. After discussing the comments with the EPA WACOR, the contractor shall incorporate comments (as appropriate) and submit the revised paper to the EPA WACOR. It is anticipated that this process may include more than one round of comments from the journal resulting in additional rounds of revisions by the contractor.

Deliverables:

Submission of publication-ready paper to EPA WACOR

Dependent upon individual and/or journal's requirements & deadlines

Task 4 – Support to Federal Interagency Pharmaceuticals in Water (PIW) Workgroup

As directed by the EPA WACOR, the contractor shall submit health effects data and other information to the EPA WACOR to support activities of the PIW workgroup. It is anticipated that the workgroup activities will require access to health effects information and other data collected and reports produced as part of this work statement and may require additional data analyses by the contractor. The scope of workgroup activities will encompass a broad range of topics related to pharmaceuticals in water that may be of interest to any subset of agencies on the workgroup. It is anticipated that the workgroup will not meet more than once quarterly (3 or 4 times/year). As directed by the WACOR, the contractor shall support the workgroup. The EPA WACOR will provide workgroup support requests (to include requests for previously-collected health effects information and other analyses or data collected; also to include any new analyses within reasonable resource allocations) to the contractor. For planning and resource estimate purposes, the contractor shall assume 25% of the LOE will be required for this task.

Deliverables:

Response to workgroup requests in each written technical direction.

A proposed due date will be provided by EPA in

G. SCHEDULE OF DELIVERABLES

<u>Task</u>	<u>Deliverable</u>	<u>Due to EPA</u>	<u># of Copies</u>
0	Work Plan	Per Contract Requirement	Electronic
	Monthly Report	Per Contract Requirement	Electronic
1	Revised Paper	2 weeks after receipt of EPA WACOR comments	1
	Second Revision	2 weeks after receipt of EPA WACOR comments	1
	Final Paper	2 weeks after receipt of EPA WACOR comments (3 weeks if 508 compliance is required)	1
2	Table of Studies	2 weeks following FDA & published literature data review	1
	Findings Discussion	1 week after delivery of Table of Studies to WACOR	1
	Draft HHBPhs	3 weeks after discussion	1
	Final HHBPhs	2 weeks after receipt of WACOR comments	1
	Draft Fact Sheet	1 week after finalization of HHBPhs	1
	Final Fact Sheet	1 week after receipt of WACOR comments	1
3	Paper Publication	Submission of paper	1
4	Response to PIW Workgroup requests	As indicated in technical direction	1

H. LEVEL OF EFFORT ESTIMATES

EPA estimates that 365 professional hours will be required to complete the tasks outlined in this Performance Work Statement.

I. CONFERENCE/MEETING GUIDELINES AND LIMITATIONS:

The contractor shall immediately notify the EPA Contracting Officer, CL COR and WA COR of any anticipated event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur \$20,000 or more in cost during

performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.

J. TRAVEL

Travel shall include two trips to Washington, DC for various planning and workgroup meetings and review of the analyses and reports with the WACOR as described in the subtasks above.

K. SPECIAL REPORTING REQUIREMENTS

There are no special reporting requirements.

L. QUALITY ASSURANCE PERFORMANCE SURVEILLANCE PLAN:

Per Contract Requirements

EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment						Work Assignment Number 5-21			
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:			
Contract Number EP-C-12-023		Contract Period 11/01/2012 To 04/30/2018 Base Option Period Number 5		Title of Work Assignment/SF Site Name Prohibition on Lead Pipe Usage					
Contractor CADMUS GROUP, INC., THE				Specify Section and paragraph of Contract SOW Section 1.2, 2.41, 1.10.4					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval				Period of Performance From 05/01/2017 To 04/30/2018					
Comments: Work Assignment Issuance to Option 5.									
<div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Superfund Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund </div>									
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.									
SFO <input type="checkbox"/> (Max 2)									
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars) (Cents)	Site/Project (Max 8)	Cost Org/Code
1									
2									
3									
4									
5									
Authorized Work Assignment Ceiling									
Contract Period:		Cost/Fee:		LOE:					
11/01/2012 To 04/30/2018									0
This Action:									724
Total:									724
Work Plan / Cost Estimate Approvals									
Contractor WP Dated:				Cost/Fee		LOE:			
Cumulative Approved:				Cost/Fee		LOE:			
Work Assignment Manager Name Michael Goldberg <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 202-564-1379 FAX Number:			
Project Officer Name Ronald Coleman <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 202-564-8491 FAX Number:			
Other Agency Official Name Erin Ridder <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 513-487-2155 FAX Number:			
Contracting Official Name Sandra Stargardt-Licis <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 513-487-2006 FAX Number:			

**PERFORMANCE WORK STATEMENT
CADMUS CONTRACT EP-C-12-023
WORK ASSIGNMENT 5-21**

A. TITLE: Technical Support for the final regulation “Use of Lead Free Pipes, Fittings, Fixtures, Solder and Flux for Drinking Water”

B. PERIOD OF PERFORMANCE: May 1, 2017 through April 30, 2018

C. WORK ASSIGNMENT CONTRACTING OFFICER’S REPRESENTATIVE (WA COR):

Michael Goldberg
OW/OGWDW/SRMD (4607M)
1200 Pennsylvania Ave. N.W.
Washington, DC 20460
(202) 564-1379
(202) 564-3758 (fax)
goldberg.michael@epa.gov

ALTERNATE WORK ASSIGNMENT CONTRACTING OFFICER’S REPRESENTATIVE (AWA COR):

Russ Perkinson
OW/OGWDW/SRMD (4607M)
1200 Pennsylvania Ave. N.W.
Washington, DC 20460
(202) 564-4901
(202) 564-3758 (fax)
perkinson.russ@epa.gov

D. BACKGROUND:

The Reduction of Lead in Drinking Water Act was enacted on January 4, 2011 to amend Section 1417 of the Safe Drinking Water Act (SDWA or Act) regarding the use and introduction into commerce of lead pipes, plumbing fittings or fixtures, solder and flux. The Act established a prospective effective date of January 4, 2014, which provided a three-year timeframe for affected parties to transition to the new requirements. The Community Fire Safety Act of 2013 further amends Section 1417 to exempt fire hydrants. EPA in December of 2013 developed a summary document of answers to frequently asked questions that is intended to help the public understand the statutory requirements of the two pieces of legislation. To further clarify and refine these statutory requirements in a new rulemaking, EPA published a proposed rule on January 17, 2017. The Federal Register Notice is available at: <https://www.federalregister.gov/documents/2017/01/17/2017-00743/use-of-lead-free-pipes-fittings-fixtures-solder-and-flux-for-drinking-water>

The purpose of this work assignment is to support EPA's clarifications and extensions to the RLDWA in the rulemaking: "Use of Lead Free Pipes, Fittings, Fixtures, Solder and Flux for Drinking Water." The work outlined in this work assignment is a continuation of the efforts initiated in WA 0-08, 1-08, 2-21, 3-21, and 4-21 and supports this new EPA Reduction of Lead in Drinking Water Implementation Rulemaking by providing the Agency with cost assessment, rulemaking support documents, comment summary and response documents, and other technical assistance.

E. QUALITY ASSURANCE:

Tasks 1, 2, 3, 4, and 5 of this work assignment requires the use of **secondary** data. Collection, use and analysis of data will be identical to the procedures described in the Supplemental Project Specific Quality Assurance Project Plan (SQAPP) completed and approved by EPA under Task 0 of WA 0-08. This is consistent with the Agency's Quality Assurance (QA) requirements. In the monthly progress report, the Contractor shall address the QA requirements outlined under Task 0, below. EPA has determined that this approved SQAPP is appropriate for the tasks outlined in this Performance Work Statement. Based on this determination, the contractor is not required to modify the approved SQAPP for this action.

F. TASK DESCRIPTION:

Task 0: Work Plan and Monthly Progress Reports

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. In addition, the workplan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and control costs.

In addition, the contractor shall prepare a statement indicating that this WA is a continuation of WA 0—08, 1-08, 2-21, 3-21 and 4-21. The workplan shall explain that collection, use and analysis of data in this work assignment will be identical to the procedures described in the SQAPP completed under task zero of WA 0-08. This task also includes monthly progress and financial reports. The monthly progress report shall summarize activities conducted for the reporting period, and in a separate QA section, whether significant QA issues have been identified and how they are being resolved. Monthly financial reports must include a table with the invoice LOE and costs` broken out by the tasks in this WA. The contractor shall immediately notify the Contract Level COR (CL COR) and WA COR if any changes to the tasks involving the collection and analysis of the data occur and prepare a

SQAPP supplementing the Contract Level (QAPP) accordingly. Work on these tasks cannot proceed until the contractor receives the EPA CL COR's notification of approval.

Task 1: Updating the Costing Data and Analyses

The contractor, upon receiving technical direction from the EPA WACOR, shall update the costing data and analysis that was conducted in WA 2-21, 3-21, and 4-21 under this contract. The EPA WACOR will be supplying the contractor with a set of questions and comments on the analysis documentation that was produced under the previous work assignment for the proposed rule. The analyses shall be updated based on the EPA WACOR comments. Changes to the analyses may be informed by new information supplied during the public comment period for the proposed rule, more recently available information, anticipated changes based on management input from the proposed regulation or other factors. Specific areas that may change include: the number of firms, amount of production and business projections for the industry; the cost for labeling plumbing product packages and marking the plumbing products themselves; the cost of self and third party certification; and, the national level cost estimates for labeling and certification for both potable and non-potable.

Once the EPA WACOR provides revisions and/or comments to the contractor, the contractor shall incorporate the changes into the cost analysis spreadsheets.

Under this task, the cost analysis spreadsheets may also need to be revised further in response to public comments, changes in the technical data, comments from OW management, and agency workgroup members, as well as changes to the proposed rule regulatory options and/or technology efficacy results. These changes are expected to occur in several waves as the final rule moves through the agency review process. All changes will be given to the contractors by written Technical Direction. After each set of significant revisions initiated by technical direction, the contractor shall supply that spreadsheet to the EPA WACOR for further review.

The cost analysis and documentation shall be due at the time of the Administrator's Signature of the final regulations "Use of Lead Free Pipes, Fittings, Fixtures, Solder and Flux for Drinking Water," currently anticipated to be in Winter – Spring 2018.

Deliverables: For work planning purposes, up to 2 draft cost analysis spreadsheets may be required. The contractor should assume three iterations of each draft document: 2 drafts and 1 final draft.

Task 2 – Development of new economic costing methodologies

It may be necessary to make significant changes and updates to the existing costing methodology or databases, and explore new types of analysis. The exact nature and timing of these changes cannot be foreseen at this time. The contractor shall make significant changes to existing methodology or databases or exploration of new lines of inquiry by following the process outlined below:

(1) The EPA WACOR will issue written technical direction to the contractor to produce a short memorandum, table, or PowerPoint outlining the details of the new analysis required. The length of the document is expected to be less than 5 pages unless otherwise specified.

(2) The EPA WACOR will issue written technical direction to the contractor once they have reviewed the document and a determination is made as to whether to move forward with the changes to existing methods or data or conduct a new analysis. If determined by EPA that new work should be conducted then the technical direction will include any EPA changes to the contractor's proposed approach and specific deadlines for completion of the work.

Deliverables: Although a precise number of these potentially significant changes to the existing methodology or databases, and/or explorations of new types of analysis cannot be given at this time, EPA expects that 2 significant changes to the existing methodology or databases, and new types of analysis will be required. The general time frame for the new analysis "scoping" deliverables will be on the order of 7 days after issuance of technical direction.

Task 3: Revisions to the Technical Support Document

Under this task, the contractor, based on written technical direction from the EPA WACOR, shall revise the proposed rule Technical Support Document that was completed under WA 4-21 for use in supporting the final rule.

The TSD shall contain the further assessment of the three proposed rule options and possibly other options which may be hybrids of the proposed options or new scenarios to be determined through the EPA Office of Water final rule process. These primary options will be defined by written Technical Direction.

Once the EPA WACOR provides revisions and/or comments to the contractor, the contractor shall incorporate the changes into the draft TSD report chapters.

Under this task, the TSD report chapters may also need to be revised further in response to public comments, changes in the technical data, comments from OW management, and agency workgroup members, as well as changes to the regulatory options from those of the proposed rule and/or technology efficacy results. These changes are expected to occur in several waves as the final rule moves through the agency review process. All changes will be given to the contractors by written Technical Direction. After each set of significant revisions initiated by technical direction, the contractor shall supply that portion or chapter of the TSD to the EPA WACOR for further review.

The Final Economic Analysis TSD report will be due at the time of the Administrator's Signature of the final regulations "Use of Lead Free Pipes, Fittings, Fixtures, Solder and Flux for Drinking Water," currently anticipated to be in Winter – Spring 2018.

Deliverables: Draft TSD chapters and revisions to the TSD chapters at technical direction of EPA WACOR. For work planning purposes, up to 2 draft of each TSD chapter may be required. The

contractor should assume three iterations of each draft document: 2 drafts and 1 final draft for each chapter.

Task 4: Public Comment Summary and Response Document

The contractor shall develop a summary of public comments and response document as identified through written technical direction by the EPA WACOR. The document shall provide a means to track all comments received during the comment period for the proposed rule organized by sections as specified in the technical direction.

After the WACOR approves the final outline for the sections, the contractor shall review, as they are received, all public comment letters, e-mail, and attachments received by the OW Docket Center and provide each comment with tracking codes. These codes will identify the comment letter (as numbered by the OW docket), comment number of the individual comment within each letter, and the comment code (from the outline) that each individual comment falls under (each comment should only be categorized into one comment code).

EPA will draft responses to each comment. The contractor shall merge the data into one file as a draft comment response document that includes all public comments and EPA responses. The contractor shall provide electronic copies of this file to the WACOR to review. After the EPA WACOR reviews and has provided written comments on the draft comment-response document, the contractor shall prepare the final comment response document for the OW docket record.

Portions of the above process may be amended to a more streamlined process, such as allowing for summarization and grouping of substantially similar comments, if the contractor is issued specific written technical direction by the EPA WACOR to allow an alternative streamlined approach.

Deliverables:

Draft and final subject category (Comment Code) Outline, draft and final assignment of tracking codes for each letter, and draft and final Comment response document (508 compliant). The contractor should assume three iterations of each draft document: 2 drafts and 1 final draft for each.

Task 5: Issue Papers and Technical Support

The contractor shall develop issue papers and technical analyses as identified through written technical direction by the EPA WACOR. EPA anticipates that some issues may become high priority during this review process and may require analytical support for internal Agency decision-making processes. Upon direction from the EPA WACOR, the contractor shall collect summary information on particular issues (e.g., manufacturing production practices), risk assessment background and status information, and perform preliminary cost-benefit analyses.

Deliverables: For work planning purposes, up to 3 analyses may be required. The contractor shall assume three iterations of each document: 2 drafts and 1 final.

G. SCHEDULE OF DELIVERABLES:

Task	Deliverable	Subject to QA?	Due to EPA	No of Copies/Medium
0	Work Plan, monthly progress reports	N	Per contract requirements	Per contract requirements
1	Draft spreadsheet on labeling and certification cost analysis.	Y	2 weeks after written technical from WACOR	1 copy of each draft/ electronically submitted via e-mail
	Final draft spreadsheet on labeling and certification cost analysis.	Y	2 weeks after written technical from WACOR. The final document shall also be 508 compliant.	1 copy of each final / electronically submitted via e-mail
2	Documents outlining significant changes to the existing methodology or databases, and new types of analysis	Y	7 days after receiving written technical direction from WACOR.	1 copy of each/ electronically submitted via e-mail
3	Draft TSD chapters.	Y	2 weeks after written technical from WACOR	1 copy of each draft electronically submitted via e-mail
	Final draft TSD chapters.	Y	2 weeks after written technical from WACOR. The final document shall also be 508 compliant.	1 copy of final electronically submitted via e-mail
4	Draft and final subject category (Comment Code) Outline	Y	Schedule to be determined in technical direction from EPA.	1 copy of each draft/final electronically submitted via e-mail
	Draft and final assignment of tracking codes for each letter	Y	Schedule to be determined in technical direction from EPA.	1 copy of each draft/final electronically submitted via e-mail

	Draft and final Comment response document	Y	Schedule to be determined in technical direction from EPA.	1 copy of each draft/final electronically submitted via e-mail
5	Draft Issue Papers and/or Technical Analyses as requested.	Y	Schedule to be determined in technical direction from EPA.	1 copy of each draft report electronically submitted via e-mail
	Final Issue Papers and/or Technical Analyses as requested.	Y	Schedule to be determined in technical direction from EPA. The final documents shall be 508 compliant.	1 copy of each final report electronically submitted via e-mail

H. LEVEL OF EFFORT ESTIMATES:

EPA estimates that 724 professional hours will be required to complete the tasks outlined in this Performance Work Statement.

I. CONFERENCE/MEETING GUIDELINES AND LIMITATIONS:

The contractor shall immediately notify the EPA Contracting Officer, CL COR and WA COR of any anticipated event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.

J. TRAVEL: No travel is anticipated for this Work Assignment.

K. SPECIAL REPORTING REQUIREMENTS: None.

L. QUALITY ASSURANCE SURVEILLANCE PLAN: Per Contract requirements.

EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment						Work Assignment Number 5-24				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-C-12-023			Contract Period 11/01/2012 To 04/30/2018 Base Option Period Number 5			Title of Work Assignment/SF Site Name OW NWP Research Coordination				
Contractor CADMUS GROUP, INC., THE					Specify Section and paragraph of Contract SOW Sections: 2.1.1, 2.1.2, 2.1.3, 2.2, 2.3, 3.2.2					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance From 05/01/2017 To 04/30/2018					
Comments: Initial work assignment issuance to Option Period 5										
<input type="checkbox"/> Superfund Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
SFO <input type="checkbox"/> Note: To report additional accounting and appropriations date use EPA Form 1900-69A. (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:		LOE:						
11/01/2012 To 04/30/2018				0						
This Action:				565						
Total:				565						
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee		LOE:				
Cumulative Approved:				Cost/Fee		LOE:				
Work Assignment Manager Name Mary Reiley <div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>(Signature)</div> <div>(Date)</div> </div>						Branch/Mail Code: Phone Number: 202-566-1123 FAX Number:				
Project Officer Name Ronald Coleman <div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>(Signature)</div> <div>(Date)</div> </div>						Branch/Mail Code: Phone Number: 202-564-8491 FAX Number:				
Other Agency Official Name Erin Ridder <div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>(Signature)</div> <div>(Date)</div> </div>						Branch/Mail Code: Phone Number: 513-487-2155 FAX Number:				
Contracting Official Name Sandra Stargardt-Licis <div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>(Signature)</div> <div>(Date)</div> </div>						Branch/Mail Code: Phone Number: 513-487-2006 FAX Number:				

**PERFORMANCE WORK STATEMENT
CADMUS CONTRACT EP-C-12-023
WORK ASSIGNMENT 5-24**

A. TITLE: Support for Office of Water Research Coordination and National Water Program Research Management Strategy

B. PERIOD OF PERFORMANCE: May 4, 2017 through April 30, 2018

C. WORK ASSIGNMENT CONTRACTING OFFICER'S REPRESENTATIVE (WA COR):

Mary Reiley
Health and Ecological Criteria Division, 4304T
Office of Science and Technology, Office of Water
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone: 202-566-1123
Fax: 202-566-1139

ALTERNATE WORK ASSIGNMENT CONTRACTING OFFICER'S REPRESENTATIVE (AWA COR):

Diana Eignor
Health and Ecological Criteria Division, 4304T
Office of Science and Technology, Office of Water
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone: 202-566-1143
Fax: 202-566-1139

D. BACKGROUND:

The Office of Water (OW) Program Offices (OST, OGWDW, OWOW, OWM and IO) and Regions developed a National Water Program Research Strategy for 2009 – 2014 and a 2015 Supplement to: (1) outline programmatic objectives and research questions and detail the necessary scientific and technical investigations and products to answer them; and (2) advance collaboration with EPA and non-EPA investigators. The Strategy and the Supplement are resources for National Water Program (NWP) staff and managers as they work with internal and external research organizations to leverage Water research needs. OW is implementing the Research Strategy and Supplement through meetings, workshops, outreach, communications, annual reports, focused strategy and action plan development. The Supplement reflects the emerging science needs of the National Water Program. The National Water Program (NWP) also maintains an Executive Committee for Research (Ex.Com) which is staffed by the NWP Research Points of Contact (POC). The Ex.Com and POC work together to identify the science,

tools, and methods needed to advance programmatic goals and environmental outcomes and work with ORD, other researchers, and stakeholders to translate those needs into science questions and research portfolios. The POC is a liaison, information gatherer, and consensus builder between the Ex.Com., ORD, and other partners and stakeholders.

Objective 1: Provide program management and analysis, technical writing, meeting*, workshop*, and outreach support for the National Water Program Executive Committee for Research (Water-ECR made up of the OW DAA and OD's) and National Water Program Points of Contact (NWP-POCs made up of senior staff from OST, OGWDW, OWM, OWOW, IO, Regions, and the OW Associate Director for Science) related to research coordination between OW and other EPA Offices and current and potential non-EPA collaborators as well as Strategy maintenance and implementation.

*Meeting and workshop session costs are estimated to not reach the \$20K threshold for SRO approval.

Objective 2: Provide science needs identification and strategic planning support to the National Water Program Executive Committee for Research and NWP-POCs related to collaborative and coordinated research and science based policy goals.

E. QUALITY ASSURANCE:

The tasks in this work assignment do not require the use of **primary** or **secondary** data. Consistent with the Agency's quality assurance (QA) requirements, the contractor does not need to supplement the Contract Level Quality Assurance Project Plan (QAPP) or to prepare a Project Specific Quality Assurance Project Plan (PQAPP). Rather, the contractor will provide a refinement within the workplan, specific to the activities under this work assignment for sections B.9; B.10 (.2, .3, .4, .6, .7). The entirety of the QAPP does not apply to the work assignment. Relevant sections include: B.9; B.10 (.2, .3, .4, .6, .7); B.11.3; and C.2.

F. TASK DESCRIPTION:

Task 0: Work Plan and Monthly Progress Reports

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. In addition, the workplan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and control costs.

In addition, the contractor shall prepare a statement indicating that this WA is a continuation of WA 4-24, Tasks 2 and 3. In addition the work plan shall specify that a Supplemental Project Specific Quality

Assurance Project Plan (SQAPP) appending the Contract Level QAPP or a PQAPP is not required. This task also includes monthly progress and financial reports. The monthly progress report shall summarize activities conducted for the reporting period, and in a separate QA section, whether significant QA issues have been identified and how they are being resolved. Monthly financial reports must include a table with the invoice LOE and costs` broken out by the tasks in this WA. The contractor shall immediately notify the Contract Level COR (CL COR) and WA COR if any changes to the tasks so that they include the collection and analysis of data occur and prepare a SQAPP supplementing the Contract Level [QAPP] accordingly. Work on these tasks cannot proceed until the contractor receives the EPA CL COR's notification of approval.

Deliverables: Work plan and monthly progress and financial reports submitted in accordance with contract requirements.

Task 1: Maintain National Water Research Strategy and Supplement

The NWP Research Strategy and the Supplement will provide conceptual directions but the specific project needs must be adjusted from year to year to reflect changes in budgets, priorities, completed, and new work. The contractor shall maintain the National Water Research Strategy and Supplement (in its Excel spreadsheet format) to reflect new areas and priorities for inquiry to support the National Water Program. Information and leads on new areas and priorities will be provided by EPA. As directed by the WACOR, the contractor shall update the Excel spreadsheet that serves as the science needs detail for the Strategy and Supplement for the FY18-FY22 research planning cycle which begins Summer 2017 and each year between June 1 and October 30 for annual adjustments

The spreadsheet shall be maintained in Excel.

Task 2: Support to NWP-POCs and Water Executive Committee for Research

The contractor shall provide technical and public presentation and outreach writing, as well as meeting logistical and facilitation support for the research coordination activities and efforts of the NWP-POCs and NWP Executive Committee on Research. This support shall include the creation of: briefing materials (power point presentations, agendas, Fact Sheets, resource binders and contents, posters), outreach products including the twice annual Recent Water Research compilation, project tracking spreadsheets and schedules, and focused strategy and action plans.

The contractor shall anticipate 2 local meetings/briefings of 1-2 day duration, in the Washington, D.C. area over the course of the period of performance. One is likely to need facilitation (Basic familiarity with the NWP Research Strategy and ORD Strategic Research Plans is needed. Technical/scientific background is not necessary) and logistical assistance (note taking, advance materials, name placards, hotel block). The contractor can assume that EPA will provide the facilities (i.e., there is no need to plan for facilities or meal charges). EPA does not anticipate either meeting reaching the agency's \$20,000 threshold for meeting/conference spending outlined in Section I.

- 1 Executive Research Committee Meeting: unfacilitated, usually held in February, briefing materials, including but not limited to power point, spreadsheets, and fact sheets delivered in appropriate electronic format
- 1 OW-ORD Management Meeting: contractor facilitated, date TBD, 40 attendees, briefing materials, including but not limited to power point, spreadsheets, and fact sheets delivered in appropriate electronic format.

The contractor shall anticipate preparing a Strategy-Supplement pamphlet, or poster for use with current and potential collaborators that shall be web-ready (PDF and 508 compliant) and delivered in Word (or the appropriate software for the content and purpose) and PDF. Presentation posters shall have a finished size of 3' x 4' and printed in full color on quality stock. Newsletters shall be approximately 7 double sided pages (total of 14 sides) provided electronically in both Word, PDF, and are 508 compliant. Anticipate delivery of: 1 poster; 1 pamphlets; 2 Newsletters. The contractor shall not mass produce and distribute these materials. The contractor shall provide materials to EPA for Agency duplication and distribution.

G. SCHEDULE OF DELIVERABLES:

Task	Deliverable	Due to EPA	No of Copies/Medium
0	Work Plan	Per Contract Requirements	Per Contract Requirements
	Monthly Reports	Per Contract Requirements	Per Contract Requirements
1	Supplement Excel spreadsheet for FY18-Fy22 Planning Cycle	June-Sept 2017	Electronic Excel
1	Supplement Excel spreadsheet for annual adjustments	Between June 1 and October 30	Electronic Excel
2	ECR briefing materials	Provided per Technical Direction	TBD Electronic Format
2	OW-ORD Management Meeting briefing materials and facilitation	Provided per Technical Direction	TBD Electronic Format
2	Recent Water Research Newsletter	August 2017 and March 2018	Electronic Word, PDF, 508 compliant
2	Poster and/or Pamphlet	Provided per Technical Direction	Poster: 1 in hardcopy as above and Electronic PDF and 508; Pamphlet: 1 page double sided Electronic PDF, 508, and Word

H. LEVEL OF EFFORT ESTIMATES:

EPA estimates that 565 professional hours will be required to complete the tasks outlined in this Performance Work Statement.

I. CONFERENCE/MEETING GUIDELINES AND LIMITATIONS:

The contractor shall immediately notify the EPA Contracting Officer, CL COR and WA COR of any anticipated event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.

J. TRAVEL:

Travel is authorized for local quarterly meetings with the WACOR and facilitating local workshops and meetings. Quarterly Contractor-WACOR meetings (typically 1.5 hours) and up to two workshops and meetings (typically 1 – 2 days) will be held at EPA Headquarters in Washington, D.C.

K. SPECIAL REPORTING REQUIREMENTS:

The contractor shall hold weekly 30-minute conference calls for planning purposes with the COR to provide updates on project status, next steps, and resolve challenges. The contractor shall report the number of hours and funds expended on a monthly basis in each monthly report.

L. QUALITY ASSURANCE SURVEILLANCE PLAN: Per Contract requirements

EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment						Work Assignment Number 5-27			
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:			
Contract Number EP-C-12-023			Contract Period 11/01/2012 To 04/30/2018 Base Option Period Number 5			Title of Work Assignment/SF Site Name Water Infrastructure Finance			
Contractor CADMUS GROUP, INC., THE					Specify Section and paragraph of Contract SOW Sections: 2.1, 2.4, 4.1, 4.2, 4.3, 4.4, 5.1, 6.1				
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance From 05/01/2017 To 04/30/2018				
Comments: Initial Work Assignment Issuance to Option Period 5									
<input type="checkbox"/> Superfund Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund									
SFO <input type="checkbox"/> Note: To report additional accounting and appropriations date use EPA Form 1900-69A. (Max 2)									
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars) (Cents)	Site/Project (Max 8)	Cost Org/Code
1									
2									
3									
4									
5									
Authorized Work Assignment Ceiling									
Contract Period:		Cost/Fee:		LOE:					
11/01/2012 To 04/30/2018				0					
This Action:				1,600					
Total:				1,600					
Work Plan / Cost Estimate Approvals									
Contractor WP Dated:				Cost/Fee		LOE:			
Cumulative Approved:				Cost/Fee		LOE:			
Work Assignment Manager Name Sonia Brubaker <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 202-564-0120 FAX Number:			
Project Officer Name Ronald Coleman <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 202-564-8491 FAX Number:			
Other Agency Official Name Erin Ridder <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 513-487-2155 FAX Number:			
Contracting Official Name Sandra Stargardt-Licis <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 513-487-2006 FAX Number:			

**PERFORMANCE WORK STATEMENT
CADMUS CONTRACT EP-C-12-023
WORK ASSIGNMENT 5-27**

A. TITLE: Water Infrastructure and Resiliency Finance Center – Finance Forum and General Financial Technical Assistance Support

B. PERIOD OF PERFORMANCE: May 1, 2017 through April 30, 2018

C. WORK ASSIGNMENT CONTRACTING OFFICER’S REPRESENTATIVE (WA COR):

Sonia Brubaker
Office of Wastewater Management
1200 Pennsylvania Ave., NW
Mail Code 4201T
Washington, DC 20460
(202) 564-0120
brubaker.sonia@epa.gov

ALT WORK ASSIGNMENT CONTRACTING OFFICER’S REPRESENTATIVE (WA COR):

Michael Patella
Office of Wastewater Management
1200 Pennsylvania Ave., NW
Mail Code 4201T
Washington, DC 20460
(202) 566-0605
patella.michael@epa.gov

D. BACKGROUND:

EPA's Water Infrastructure and Resiliency Finance Center (Water Finance Center) serves as a financing information resource for communities, municipal utilities, and private entities as they seek to address their water infrastructure needs and invest in sustainable long-term solutions.

Innovation in financing and increased resiliency are key components to meeting water infrastructure needs. Through information sharing, partnerships and community engagement, the Center plays an important role in elevating the critical importance of financing water infrastructure. The Center is working to:

- *Promote innovative financing approaches.* The Center encourages effective use of federal, state and local funds and works with the private sector, where appropriate, to build partnerships to increase water infrastructure investment.
- *Support and expand capacity building efforts through collaborative technical assistance.* The Center is working with states, communities, universities and non-profits to help utilities

explore financing options for their local needs. The Center provides information for developing sustainable funding sources for water efficiency, energy efficiency, water reuse, stormwater, and green infrastructure.

E. PURPOSE

This work assignment is a continuation of effort under Work Assignment 4-27.

F. QUALITY ASSURANCE:

Tasks 2, 3 and 5 of this amendment requires the use of secondary data. EPA's quality assurance staff has determined that the quality assurance process outlined by Cadmus in the Supplemental Quality Assurance Project Plan (SQAPP) approved by EPA is inapplicable and appropriate for this continuation effort.

G. TASK DESCRIPTION:

Task 0: Work Plan and Monthly Progress Reports

The contractor shall develop a work plan that describes how the tasks in this work assignment will be carried out and managed. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. In addition, the workplan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and control costs.

This task also includes monthly progress and financial reports. The monthly progress report shall summarize activities conducted for the reporting period, and in a separate QA section, whether significant QA issues have been identified and how they are being resolved. Monthly financial reports must include a table with the invoice LOE and costs broken out by the tasks in this WA. The contractor shall immediately notify the Contract Level COR (CL COR) and WA COR if any changes to the tasks involving the collection and analysis of the data occur and prepare a SQAPP supplementing the Contract Level (QAPP) accordingly. Work on these tasks cannot proceed until the contractor receives the EPA CL COR's notification of approval.

Deliverables: Work plan and monthly progress and financial reports submitted in accordance with contract requirements.

Task 1: Finance Forums

The contractor shall provide support to EPA for the series of water finance forums that EPA will hold in various EPA regions. These forums will bring together communities with drinking water, wastewater, and stormwater project financing needs with various financing sources and information.

The forums will be an opportunity for communities to meet key regional federal and state agency contacts and technical assistance providers to learn about financing challenges and solutions. For planning purposes, the contractor shall assume a total of two finance forums within this period of performance (Region 4 - June 2017 and Region 7 - September 2017)

The finance forum will be co-sponsored with the local Environmental Finance Centers. The audience will include utilities and community leaders from drinking water, wastewater, and stormwater utilities.

While the specific locations and dates have not yet been selected, the contractor shall assume the forums will be held in a major city in the EPA Region within 60 miles of the regional office. For planning purposes, the contractor shall assume each forum will be 1.5-days in length and will require 2 on-site support staff.

Task 1.a. Pre-Forum Activities

The contractor shall support EPA through session logistics including developing necessary background materials prior to the meeting including but not limited to information on specific water infrastructure financing needs for each of the participating communities, compiling state financing contact information, and developing session discussion questions. Prior to starting work, technical direction with further details will be provided if support is needed.

Deliverables: The contractor shall support EPA by compiling state financing contact information, and developing session discussion questions.

Task 1.b. On-site Forum Activities

The contractor shall support EPA in on-site finance forum activities and logistics coordination. Session facilitation shall be by an experienced facilitator knowledgeable of water sector utility upfront planning and finance issues. In addition, an individual familiar with water utilities is needed to take notes.

Deliverables: The contractor shall support EPA by facilitating forum sessions and taking notes during the sessions.

Task 1.c. Post-Forum Activities

The contractor shall support EPA in post-finance forum activities including preparing a post-forum summary with notes from sessions. In addition, case study write ups shall be provided for projects presented in the sessions.

EPA expects the total cost of each individual forum will exceed the agency threshold of \$20,000. Agency approval will be obtained approximately 3 weeks prior to the event. Note: These recurring finance forums are an expected deliverable from the Water Finance Center and the three previous forums were approved by the agency.

Deliverables: The contractor shall prepare a post-forum summary based on the notes taken during the forum. Case study write ups shall be provided for projects presented in the sessions.

Task 2: Financial Technical Assistance and Guidance

As directed by the WA COR through technical direction, the contractor shall support EPA's assistance to the Center by providing research that will support the Center in helping communities explore financing options to address their clean water and drinking water obligations. This research shall include innovative financing mechanisms to further water efficiency, energy efficiency, green infrastructure, and other climate change resilience and adaptation practices.

Task 2.a. General Program Support

The contractor shall support EPA by synthesizing information from regional Water Finance Center coordinator conference calls. The contractor shall attend regional coordinator conference calls and take notes.

The contractor shall provide general program support or financial technical assistance support for the Office of Wastewater Management including topics of affordability, State Revolving Funds, Environmental Finance Centers, the Environmental Financial Advisory Board (EFAB), conservation finance, and other general financial topics.

The contractor shall provide quick turn-around tasks such as participating in conference calls with HQ staff on various finance topics, developing one-pagers/fact sheets, and presentations. Other activities shall include researching utility financing needs and developing white papers on financing approaches and financial decision support tools of sustainable financing. Work shall also include providing sharing successes through training, outreach, brochures, and peer-to-peer learning workshops. Additionally, work shall also include providing notes and/or logistical planning for events and meetings. Prior to starting work, technical direction with further details will be provided.

Deliverables: The contractor shall attend regional coordinator conference calls and take notes. Summary notes shall be prepared and delivered to the WA COR after each call. The contractor shall assume monthly 1-hour regional coordinator conference calls.

The contractor shall develop an accomplishments report for the regional Environmental Finance Center activities. This report shall be 10-15 pages long. A short brochure/fact sheet shall also be developed. The accomplishments report and brochure/fact sheet shall be visually attractive as determined by EPA. Prior to development of the draft, EPA will provide examples of formats, colors, and fonts that can be used and will provide feedback on the draft deliverable before it is finalized. They will be posted on EPA's website and final deliverables be made 508 compliant.

The contractor shall support on-site note-taking at one event/meeting of the Environmental Financial Advisory Board in Kansas City, MO in August 2017. Logistics

shall also include venue and lodging arrangements for up to 35 participants. Technical direction will be provided if support is needed.

For planning purposes, the contractor shall assume up to three 1-hour HQ conference calls, two factsheets, and one 10 page research analysis on a financing topic.

Task 2.b. Resiliency Financing

The contractor shall support EPA with resiliency financing approaches in continuing to develop a Resiliency Finance learning module to post on EPA's website. This learning module shall include information that utilities can use to develop funding and financing resiliency approaches for different stages of resiliency and disaster planning. Research on resiliency funding provided at the federal, state, private, and non-profit levels shall be performed to update the Center's website. As a result of this research, the contractor shall identify areas where the Center can collaborate with other agencies and non-profits to provide assistance and information to communities with water resiliency financing needs.

The contractor shall also support a convening in Washington, DC with internal and external stakeholders to discuss market-place solutions for resiliency financing topics. This event may take place in Fall/Winter 2017. If the total cost of the event is expected to exceed the agency threshold of \$20,000, then agency approval will be obtained approximately 3 weeks prior to the event. Prior to starting work, technical direction with further details will be provided.

Deliverables: The contractor shall support EPA in continuing to develop a learning module on resiliency and disaster financing which will be posted on the Center's website. The contractor shall participate in approximately 10 30-min calls with EPA to discuss the progress of the learning module. The contractor shall also develop a PowerPoint presentation with the content of the learning module which may include interactive features. The platform will likely use either the Articulate or Captive software. The learning module shall be visually attractive.

For planning purposes, the contractor shall support EPA with a convening in Washington, DC in Fall/Winter 2017. Agenda planning and logistical support may be included for planning purposes. Technical direction will be provided if this support is needed.

Task 2.c. Financial Technical Assistance

The Water Finance Center is working with the EPA Office of Water Project Management Office to develop a "Water Finance Clearinghouse" that will be posted on EPA's website in Summer 2017. The contractor shall support EPA in research to add to the funding and financing resources that will be searchable within the Clearinghouse before it is posted on the website. Technical direction will be given if this support is needed. The contractor shall support EPA in routine maintenance to update

the resources in the Clearinghouse once it is posted on the website. Learning modules are also being developed that will be linked within the Clearinghouse.

The contractor shall support EPA webinars on various finance topics including but not limited to the Water Finance Clearinghouse, stormwater financing, financial capacity technical assistance, resiliency, and other financial topics in the water sector.

The contractor shall develop financial technical assistance materials such as developing community financing analyses, templates, and white papers for long-term financial sustainability. Prior to starting work, technical direction with further details will be provided if support is needed.

Deliverables: The contractor shall provide support in routine maintenance to update the resources in the Clearinghouse once it is posted on the website. EPA will export the resource list to a spreadsheet and technical direction will be given on how to update resources. For planning purposes, assume this maintenance will occur twice per year. Technical direction will be given if research is needed for resources prior to the Clearinghouse going live in Summer 2017. For planning purposes, assume 40 hours of research is needed.

The contractor shall provide support for 5 – 8 webinars in addition to the webinars identified elsewhere in this work assignment. This includes pre-webinar support using EPA's Adobe Connect webinar software, developing a flyer, managing registration process through EPA's EventBrite service agreement, developing PowerPoint template, contacting speakers, and collecting information from speakers. The contractor shall provide day-of-webinar support including managing webinar platform, recording the webinar, and facilitating the event. The contractor shall provide post-webinar support including preparing a 508 compliant webinar recording to post on EPA's YouTube page (timecoded transcript as an SRT file, YouTube information file, and MP4 recording), transcript in Word, polls and summary information, Q&A documents, and list of registrants and attendees.

The contractor shall support EPA in developing templates for community financing analyses, templates, and white papers for long-term financial sustainability. These write-ups may include affordability considerations and market-place solutions and opportunities. These materials are intended to provide guidance for communities who are seeking information from the Center and will be posted on EPA's website. For planning purposes, assume developing two write-ups/white papers.

Task 3: Public-Private Partnerships

Under this task, the contractor shall support EPA through research and analysis of best practices for public-private partnerships (and public-public partnerships) in the water sector. The contractor shall also support EPA in a webinar on this research.

Task 3.a. Public-Private Partnership Research

The contractor shall continue to research on market mechanisms of public-private partnerships in the water sector. The contractor shall synthesize this information into a report that is no longer than 10 pages.

Deliverables: The contractor shall research 1) the potential opportunities for lifting restrictions on tax-exempt financing, or expanding tax-exempt status and 2) the potential opportunities of making SRF monies more accessible to the private sector, and evaluate options for providing SRF or other federal support to facilitate private investment. All research shall be provided to EPA in a Word document.

Task 3.b. Public-Private Partnerships Report

The contractor shall synthesize the research into a “P3 Market and Barriers Report.” EPA will determine the research elements that will be included in the report.

Deliverables: The contractor shall synthesize research into a P3 Market and Barriers Report that is visually attractive as determined by EPA and no more than 5 pages long. Prior to development of the draft, EPA will provide examples of formats, colors, and fonts that can be used and will provide feedback on the draft deliverable before it is finalized. The contractor shall provide EPA with a draft PDF and with a final 508 compliant PDF for EPA to post on the website.

Task 3.c. Public-Private Partnerships Webinar

The contractor shall develop and support a P3 webinar for state and local communities to convey the findings of the research as described in Task 3.a.

Deliverables: The contractor shall assist in preparing one webinar, 1-2 hours in length, to showcase the research in Task 3.a on public-private partnerships. The contractor shall contribute to an existing P3 presentation for this webinar. The webinar is expected to be held in Fall 2017.

The contractor shall provide pre-webinar support under this task, including using EPA’s Adobe Connect webinar software, developing a flyer, managing registration process through EPA’s EventBrite service agreement, developing PowerPoint template, contacting speakers, and collecting information from speakers.

The contractor shall provide day-of-webinar support including managing webinar platform, recording the webinar, and facilitating the event.

The contractor shall provide post-webinar support including preparing a 508 compliant webinar recording to post on EPA’s YouTube page (timecoded transcript as an SRT file, YouTube information file, and MP4 recording), transcript in Word, polls and summary information, Q&A documents, and list of registrants and attendees. b

Task 4: Water Loss Control Train-the-Trainer

A water loss control program helps a water utility to identify both real losses of water, the water physically lost through leaking pipes, and apparent losses, the water that is consumed but not accounted for in billing. EPA's 2011 Drinking Water Infrastructure Needs Survey and Assessment shows that approximately \$247.5 billion dollars is needed over the next 20 years to upgrade transmission and distribution systems at drinking water systems. Of this amount, \$97 billion is estimated to be needed for water loss control. Average water loss in systems is 16 percent - up to 75 percent of that is recoverable. Once a water system identifies these real and apparent losses through water loss control program, it can implement controls to reduce them. This recovered water can be sold to consumers, generate revenue, and meet water demands.

Under this task, the contractor shall support EPA's development of a Water Loss Control Finance learning module for state staff to inform drinking water systems on the managerial and financial benefits of implementing a water loss control program. The package shall be accessed from EPA's website. EPA will post files to EPA's website.

Task 4.a. Water Loss Control PowerPoint

Deliverables: The contractor shall continue to support EPA in developing the format and content for Power Point presentations on financing water loss control programs for a learning module. The main topics are:

- Managerial & Financial Benefits of Developing a Water Loss Program
- Funding a water loss control program
- Table top exercise on the development of a water loss control program and utilizing the water audit tool. The exercises should include financial and managerial benefits.
- Case studies identified by EPA on water systems that have water loss programs in place discussing process of financing, challenges, and stakeholder engagement/interactions
- Train-the-Trainer instructions/template

Managerial and financial aspects shall be highlighted in each. Water quality, water quantity (including related to drought), and cost savings benefits shall also be included.

The contractor shall participate in approximately five 30-min calls with EPA to discuss the progress of the learning module. The platform will likely use either the Articulate or Captive software. The learning module shall be visually attractive as determined by EPA. Prior to development of the draft, EPA will provide examples of formats, colors, and fonts that can be used and will provide feedback on the draft deliverable before it is finalized

Task 4. b. Water Loss Control webinar

Deliverables: The contractor shall develop a version of the training described above to be delivered in webinar format. The training shall be no longer than two hours and should highlight the benefits of

implementing a water loss program and how it enhances the managerial and financial capacity of the system.

The contractor shall provide pre-webinar support under this task, including identifying webinar software (including the ability to use EPA's Adobe Connect webinar software), developing a flyer, managing registration process through EPA's EventBrite service agreement, developing PowerPoint template, contacting speakers, and collecting information from speakers.

The contractor shall provide day-of-webinar support including managing webinar platform, recording the webinar, and facilitating the event.

The contractor shall provide post-webinar support including preparing a 508 compliant webinar recording to post on EPA's YouTube page (timecoded transcript as an SRT file, YouTube information file, and MP4 recording), transcript in Word, polls and summary information, Q&A documents, and list of registrants and attendees.

Task 5: State Revolving Funds (SRFs)

SRFs continue to be one of the federal government's most successful infrastructure programs. The Clean Water State Revolving Fund (CWSRF) and Drinking Water State Revolving Fund (DWSRF) provide critical funding to water utilities financing their capital needs through low interest loans and additional subsidization to assist systems in disadvantaged communities. The contractor shall explore how the successful attributes of these programs can be further utilized to meet the growing capital needs of water, wastewater, and stormwater utilities.

Task 5.a. SRF research

Deliverables: The contractor shall continue to develop a CWSRF/DWSRF learning module that will be posted on EPA's website. The contractor shall participate in approximately ten 30-min calls with EPA to discuss the progress of the learning module. The contractor shall also continue to develop a PowerPoint presentation with the content of the learning module which may include interactive features. The platform will likely use either the Articulate or Captive software. The learning module shall be visually attractive as determined by EPA. Prior to development of the draft, EPA will provide examples of formats, colors, and fonts that can be used and will provide feedback on the draft deliverable before it is finalized.

The contractor shall research state SRF programs on issues such as but not limited to predevelopment, planning, resiliency, disasters, affordability, and sustainability. Technical direction will be provided by the EPA WACOR before contractor work begins. Direction may contain researching state Intended Use Plans, workplans, management structures, etc.

Task 5.b. SRF write-ups

Deliverables: The contractor shall develop write-ups for EPA internal use on state SRF programs based on research in Task 5.a. Technical direction will be provided before contractor work begins. For planning purposes, the contractor shall assume no more than three 5-page write-ups.

H. SCHEDULE OF DELIVERABLES:

The deliverable dates indicated are for planning purposes. Where necessary, the EPA WACOR will issue technical direction that will include additional information and specific deliverable date. Also, deliverables shall be submitted to the EPA WACOR in an electronic format unless otherwise specified in technical direction.

Task	Deliverable	Date Due to EPA
Task 0	Amended Work Plan and Budget Monthly Progress Reports	In accordance with Contract requirements. In accordance with contract requirements.
Task 1.a	Draft documents Final documents	Within 2 weeks of technical direction Within 2 weeks of EPA's feedback on drafts
Task 1.b	Summary notes for each session	Within 3 days of forum completion.
Task 1.c	Draft forum summary Final forum summary	Within 1 week of forum completion Within 2 weeks of EPA comments
Task 2.a	Notes from regional coordinator calls Quick turn-around tasks Draft and final accomplishments report Draft and final brochure/fact sheet Draft and final notes for on-site Environmental Financial Advisory Board meeting	Within 2 days of coordinator calls. Deliverables 1-3 days within technical direction. Draft by June 30, 2017; Final by August 4, 2017. Draft by July 14; Final by August 4, 2017. Draft within 2 weeks of the meeting; Final within 2 weeks of EPA's feedback on draft.

Task 2.b	<p>Draft and final PowerPoint presentations</p> <p>Draft and final learning module</p> <p>Draft and final agenda for convening in Fall/Winter 2017.</p> <p>Draft and final logistical support for convening in Fall/Winter 2017.</p> <p>Draft and final notes for convening in Fall/Winter 2017.</p>	<p>Draft within 3 weeks of technical direction from WA COR; Final within 2 weeks of EPA comments on draft.</p> <p>Draft within 3 weeks of technical direction from WA COR; Final within 2 weeks of EPA comments on draft.</p> <p>Draft by July 21; Final within 1 week of EPA comments on draft.</p> <p>Draft within 2 weeks of technical direction from WA COR; Final within 1 weeks of EPA comments on draft.</p> <p>Draft within 2 weeks of the meeting; Final within 2 weeks of EPA's feedback on draft.</p>
Task 2.c	<p>Draft and final research</p> <p>Draft and final PowerPoint presentations</p> <p>Timecoded transcript as an SRT file, YouTube information file, and MP4 recording</p> <p>Draft and Final write-ups</p>	<p>Draft within 2 weeks of technical direction from WA COR; Final within 2 weeks of EPA comments on draft.</p> <p>Draft within 2 weeks of technical direction from WA COR; Final within 1 weeks of EPA comments on draft.</p> <p>Within 1 month of webinar completion</p> <p>Draft within 3 weeks of technical direction from WA COR; Final within 3 weeks of EPA comments on draft.</p>
Task 3.a	Research on market and barriers	Complete within 3 week of technical direction from WA COR.
Task 3.b	P3 Market and Barriers Report	Within 1 month of research completion.

Task 3.c	Timecoded transcript as an SRT file, YouTube information file, and MP4 recording	Within 1 month of webinar completion.
Task 4.a	Draft and final PowerPoint presentations Draft and final case studies Draft and final table top exercises Draft and final learning module	Draft within 3 weeks of technical direction from WA COR; Final within 2 weeks of EPA comments on draft PowerPoint presentations.
Task 4.b	Timecoded transcript as an SRT file, YouTube information file, and MP4 recording	Within 1 month of webinar completion
Task 5.a	Draft and final PowerPoint presentations Draft and final learning module SRF research	Draft within 3 weeks of technical direction from WA COR; Final within 2 weeks of EPA comments on draft.
Task 5.b	SRF write-ups	Within 1 month of technical direction from WA COR

I. LEVEL OF EFFORT ESTIMATES:

EPA estimates that 1,600 professional hours will be required to complete the tasks outlined in this Performance Work Statement.

J. CONFERENCE/MEETING GUIDELINES AND LIMITATIONS:

EPA has identified events that will potentially incur \$20,000 in cost. The contractor shall track and report cost associated with each individual event in accordance with the EPA Office of the Chief Financial Officer's March 10, 2016 Conference Spending Guide
http://intranet.epa.gov/fmdvally/conferences/documents/conference_spending_guide.pdf

K. TRAVEL:

Travel is required to attend Finance Forums. Each forum is scheduled for either 1 or 1.5 days (Task 1.b). A 5170 for each is required.

Travel is required for the on-site note-taking at one event/meeting of the Environmental Financial Advisory Board in Kansas City, MO in August 2017 (Task 2.a). A 5170 is not required as this is a FACA.

Travel is required to attend a convening in Washington, DC in Fall/Winter 2017 (Task 2.b). A 5170 is required.

EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment						Work Assignment Number 4-29				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-C-12-023			Contract Period 11/01/2012 To 04/30/2017 Base <input checked="" type="checkbox"/> Option Period Number			Title of Work Assignment/SF Site Name Perchlorate Occurrence in DW				
Contractor CADMUS GROUP, INC., THE						Specify Section and paragraph of Contract SOW Sections 1.2, 2.0, 3.0, 4.0 and 5.0				
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval						Period of Performance From 11/14/2016 To 04/30/2017				
Comments: Work Assignment Issuance										
<input type="checkbox"/> Superfund Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
SFO <input type="checkbox"/> (Max 2) Note: To report additional accounting and appropriations date use EPA Form 1900-69A.										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:		LOE:						
11/01/2012 To 04/30/2017				0						
This Action:				300						
Total:				300						
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee		LOE:				
Cumulative Approved:				Cost/Fee		LOE:				
Work Assignment Manager Name Clifton Townsend <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 202-564-1576 FAX Number:				
Project Officer Name Ronald Coleman <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 202-564-8491 FAX Number:				
Other Agency Official Name Erin Ridder <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 513-487-2155 FAX Number:				
Contracting Official Name Donna Reinhart <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 513-487-2114 FAX Number:				

**PERFORMANCE WORK STATEMENT
CADMUS CONTRACT EP-C-12-023
WORK ASSIGNMENT 4-29**

A. TITLE: Support for Perchlorate Occurrence in Drinking Water

B. PERIOD OF PERFORMANCE: Effective Date through April 30, 2017

C. WORK ASSIGNMENT CONTRACTING OFFICER'S REPRESENTATIVE (WA COR):

Clifton Townsend
US EPA OW/OGWDW/SRMD
MC-4607M
1200 Pennsylvania Ave., NW
Washington, D.C. 20460
Phone: (202) 564-1576
Fax: (202) 564-3760
E-mail: Townsend.clifton@epa.gov

ALTERNATE WORK ASSIGNMENT CONTRACTING OFFICER'S REPRESENTATIVE (Alt. WA COR):

Samuel Hernandez
US EPA OW/OGWDW/SRMD
MC-4607M
1200 Pennsylvania Ave., NW
Washington, D.C. 20460
Phone: (202) 564-1735
Fax: (202) 564-3760
E-mail: Hernandez.samuel@epa.gov

D. BACKGROUND:

EPA is developing a national primary drinking water regulation (NPDWR) for perchlorate. EPA is evaluating the science of the health effects of perchlorate in developing a Maximum Contaminant Level Goal (MCLG) and proposed NPDWR. EPA is also evaluating the feasibility and affordability of treatment technologies to remove perchlorate from drinking water and is examining the costs and benefits of a Maximum Contaminant Level (MCL) and alternative MCLs.

Estimates of perchlorate occurrence in public water systems are key drivers for national costs and benefits estimates. EPA's Unregulated Contaminant Monitoring Regulation 1 (UCMR 1) presents the only nationally representative data available that EPA used to evaluate and analyze information on the occurrence of perchlorate in drinking water.

The UCMR 1 was conducted for a census of large public water systems (PWS) (serving more than 10,000 people) and a nationally representative statistical sample of small systems (serving 10,000 people or fewer). Monitoring was primarily conducted between 2001 and 2003. UCMR 1 data were exclusively used for modeling estimates of national perchlorate occurrence in PWSs. To help assess national perchlorate occurrence, EPA also reviewed supplemental occurrence data collected by several individual states (including Arizona, California, Iowa, Maryland, Massachusetts, Nevada, New Jersey, and Texas) and other organizations.

Under a previous work assignment 0-10, 1-10, and 2-10 and Cadmus contract EP-C-07-022, the contractor supported the development of a perchlorate occurrence and monitoring report that describes the data and analytical approaches used by EPA to develop national estimates of perchlorate occurrence in public drinking water systems. The draft was finalized in 2012.

In September 2012 the U.S. Chamber of Commerce submitted to the EPA an Information Quality Guidelines Request for Correction (RFC) of the occurrence information from UCMR 1 that was developed and relied upon by the EPA to support its determination to regulate perchlorate under SDWA.

The Chamber's petition had two primary arguments for suggesting that the UCMR 1 data do not comply with the Information Quality Guidelines:

- The Chamber argued that the UCMR 1 data is unreliable, as it was not collected in accordance with the methodology required by the UCMR 1 regulations.
 - This assertion is based on the belief that samples must be collected at the entry point to the distribution system (i.e., after the water has passed through any treatment or blending facilities).
 - EPA addressed this issue with contractor support under the previously mentioned work assignment and revised the draft Perchlorate Occurrence and Monitoring Report in September of 2013.
- The Chamber also argued that more accurate and reliable data than UCMR 1 on perchlorate occurrence is available.

EPA committed to further evaluate available information on the occurrence of perchlorate in public water systems, including data provided in the RFC, to inform the Agency's Health Risk Reduction and Cost Analysis for the proposed rule.

This work assignment provides support to address our commitment and update the following sections and exhibits of the 2013 draft report:

- 1) Exhibits 1 & 2: Summary of state standards and guidance levels;
- 2) Section 2.4 and exhibit 5: laboratory analytical methods;

3) Section 2.4.3 laboratory analysis cost estimates;

4) Section A.2.1 National-scale studies or surveys (AWWARF; AWS; EWG; NHANES);

5) Section A.2.2 Individual and small multi-state studies. Included in this section is information from the Arizona Department of Environmental Quality; Consumer Confidence Reports; Iowa State Rural Well Water Survey; Long Island New York; Maryland Department of Environment and Exhibit A-9; Massachusetts Department of Environmental Protection and Exhibit A-10; New Mexico Environment Department; New Jersey Drinking Water Quality Institute; Nevada Division of Environmental Protection; Potomac River Study; and Texas Commission of Environmental Quality;

6) Appendix B: Review of perchlorate occurrence in California: 1994-2011. Exhibits B-1 – 7; and

7) U.S. Chamber of Commerce Exhibits A – H (primarily C and D)

Exhibit C. Malcolm Pirnie, Inc. consolidated the UCMR 1 data upon which EPA relied in making its regulatory determination. Malcolm Pirnie, *National Cost Implications of a Potential Perchlorate Regulation* (AWWA July 2008). According to Malcolm Pirnie, a total of 189 water sources had at least one sample of perchlorate above 6 ug/L. *Id.* Of these, 112 were located in California and 77 were located in other states.

Exhibit D. Population data from EPA's Safe Drinking Water Information System (SDWIS) and EPA's UCMR 1 database, it can be determined that of the 11.8 million people served by public water systems with at least one detection above 6 ug/L, at least 4.2 million resided in California. See, Worksheet (Exhibit D).

E. QUALITY ASSURANCE:

Task 1 in this work assignment requires the use of secondary data. Collection, use and analysis of data will be identical to the procedures described for Tasks 2,3,4, and 5 in the Supplemental Quality Assurance Project Plan submitted and approved under task 0 of WA 0-10, consistent with the Agency's Quality Assurance requirements, appending the Contract Level Quality Assurance Project Plan. The project specific QA requirements must be addressed in the monthly progress reports as specified under Task 0 of this work assignment.

F. TASK DESCRIPTION:

Task 0: Work Plan and Monthly Progress Reports

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. In addition, the workplan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. If a subcontractor(s) is proposed and

subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and control costs.

In addition, the contractor shall prepare a statement indicating that this WA is a continuation of WA 0-10, 1-10 and 2-10. The workplan shall explain that collection, use and analysis of data in this work assignment will be identical to the procedures described in the SQAPP completed under task(s) Tasks 2, 3, 4, and 5 for WA 0-10. This task also includes monthly progress and financial reports. The monthly progress report shall summarize activities conducted for the reporting period, and in a separate QA section, whether significant QA issues have been identified and how they are being resolved. Monthly financial reports must include a table with the invoice LOE and costs` broken out by the tasks in this WA. The contractor shall immediately notify the Contract Level COR (CL COR) and WA COR if any changes to the tasks involving the collection and analysis of the data occur and prepare a SQAPP supplementing the Contract Level (QAPP] accordingly. Work on these tasks cannot proceed until the contractor receives the EPA CL COR's notification of approval.

Deliverables: Work plan and monthly progress and financial reports submitted in accordance with contract requirements.

Task 1: Technical Analysis and Programmatic Support

This task supports the updating of the draft Perchlorate Occurrence and Monitoring Report that was completed in June 2012 under WA 4-14 under previous Cadmus contract EP-C-07-022.

Based on written technical direction from the EPA WA COR, the contractor shall provide support in updating and finalizing the Perchlorate Occurrence and Monitoring Report. The contractor shall provide technical and analytical writing related to the occurrence of Perchlorate, including occurrence estimation protocol, risk assessment, exposure, and/or methods.

The contractor shall review and evaluate the utility of all new data and information provided by the Chamber of Commerce "Request for Correction: "Drinking Water: Regulatory Determination on Perchlorate" letter on September 18, 2012. This data and information should be reflected in the occurrence and monitoring report.

The contractor shall review and update all supplemental occurrence data in the occurrence and monitoring report. All updates and revisions of the supplemental data should be reflected in the occurrence and monitoring report.

Other support shall include: identifying and correcting formatting, typographical, grammatical, and other editing issues; identifying inconsistencies within and across the occurrence and monitoring report and other supporting documents (e.g., technical support documents); ensuring the accuracy of cross-references; and retrieving copies of cited references. The contractor shall assemble, to submit to the OW Docket, all materials cited in the preamble. The contractor shall develop and maintain a typed list of all references being obtained from the EPA authors of the preamble, as

identified by the EPA WA COR, and their status. The WA COR will specify, in written technical direction, the inclusion of any additional materials that the contractor is to submit to the Docket.

_Deliverables: Summary of Chamber of Commerce “new” data. Summary of updated supplemental data. Draft and Final Perchlorate Occurrence and Monitoring Report (508 compliant and web accessible)

G. SCHEDULE OF DELIVERABLES:

The contractor shall ensure that all 508 compliant documents developed in all tasks outlined in this work assignment will align with EPA’s 508 compliance checks (keywords, titles, tables, tags, etc.). The contractor is responsible for maintaining and utilizing the same version of Adobe as the EPA for purposes of developing and maintaining 508 compliant documents. To the extent practical, documents which are developed for this work assignment, and are to be 508 compliant should be designed to be such from their inception, minimizing the effort for conversion and maximizing 508 compliance quality assurance.

Task	Deliverable	Due to EPA	No of Copies/ Medium
0- Work Plan and Monthly Progress Reports	Work plan and monthly progress and financial reports	Per Contract	Per Contract
1 - Technical Analysis and Programmatic Support	<p>*Summary of Chamber of Commerce “new” data</p> <p>*Summary of updated supplemental data</p> <p>*Draft and Final Occurrence and Monitoring Report</p>	TBD in written technical direction from the EPA WACOR	Electronic(508 compliant and web accessible)
* indicates the deliverable requires quality assurance subject to a QAPP			

H. LEVEL OF EFFORT ESTIMATES:

EPA estimates that 300 professional hours will be required to complete the tasks outlined in this Performance Work Statement.

I. CONFERENCE/MEETING GUIDELINES AND LIMITATIONS:

The contractor shall immediately notify the EPA Contracting Officer, CL COR and WA COR of any anticipated event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.

J. TRAVEL: No travel is anticipated for the performance period.

K. SPECIAL REPORTING REQUIREMENTS: No special reporting requirements are anticipated for the performance period

L. QUALITY ASSURANCE SURVEILLANCE PLAN: Per Contract requirements.

EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment						Work Assignment Number 5-30				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-C-12-023			Contract Period 11/01/2012 To 04/30/2018 Base Option Period Number 5			Title of Work Assignment/SF Site Name Lead Service Line Removal				
Contractor CADMUS GROUP, INC., THE					Specify Section and paragraph of Contract SOW section 1.5.4					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance From 05/01/2017 To 04/30/2018					
Comments: Initial work assignment issuance to Option Period 5.										
<input type="checkbox"/> Superfund Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
SFO <input type="checkbox"/> Note: To report additional accounting and appropriations date use EPA Form 1900-69A. (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:		LOE:						
11/01/2012 To 04/30/2018				0						
This Action:				575						
Total:				575						
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee		LOE:				
Cumulative Approved:				Cost/Fee		LOE:				
Work Assignment Manager Name Michael Goldberg <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 202-564-1379 FAX Number:				
Project Officer Name Ronald Coleman <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 202-564-8491 FAX Number:				
Other Agency Official Name Erin Ridder <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 513-487-2155 FAX Number:				
Contracting Official Name Sandra Stargardt-Licis <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 513-487-2006 FAX Number:				

**PERFORMANCE WORK STATEMENT
CADMUS CONTRACT EP-C-12-023
WORK ASSIGNMENT NO. 5-30**

A. TITLE: Lead Service Line Replacement Analysis for the Long-term Revisions to the Lead and Copper Rule b

B. PERIOD OF PERFORMANCE: May 1, 2017 through April 30, 2018

C. WORK ASSIGNMENT CONTRACTING OFFICER'S REPRESENTATIVE (WACOR):

Michael Goldberg
US EPA, Room 2227N
1200 Pennsylvania Avenue, NW
Mail Code 4607M
Washington, DC 20460
(202)-564-1379
E-mail: goldberg.michael@epa.gov

ALTERNATE WACOR:

Lameka Smith
US EPA, Room 2357-D
1200 Pennsylvania Avenue, NW
Mail Code 4607M
Washington, DC 20460
(202)-564-1629
Fax: (202)-564-3767
E-mail: smith.lameka@epa.gov

D. BACKGROUND:

EPA is interested in the barriers in state or local laws that would affect a public water system's ability to replace lead service lines on private property. In addition, EPA would like to understand how some water systems have been successful in implementing full lead service line replacement programs. The current Lead and Copper Rule (LCR) requires a public water system that is triggered into the lead service line replacement requirements (40 CFR 141.84) to only replace the part of the service line that it owns, typically the part that goes from the water distribution main to the property line of a home or building. This is based on EPA's interpretation of the statutory definition of "public water system" in Section 1401 of the Safe Drinking Water Act (SDWA) which provides:

The term "public water system: means a system for the provision to the public of water for human consumption through pipes or other constructed conveyances, if such system has at least fifteen service connections or regularly serves at least twenty-five individuals. Such term includes (i) any collection, treatment, storage, and distribution facilities under control of the

operator of such system and used primarily in connection with such system, and (ii) any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system.

EPA's interpretation of the phrase "under control of the operator of such system" has evolved over time. In the 1991 LCR, EPA interpreted control "as being present in cases where a system has authority to replace or repair or maintain the line" and created a rebuttable presumption that a system controlled lead service lines. 56 Fed. Reg. 26,460, 26,503-05 (June 7, 1991). That provision of the rule was vacated because the Court reviewing the rule found that EPA "failed to provide adequate notice that it would adopt a novel definition of control." *American Water Works Association v. EPA*, 40 F.3d 1266, 1275 (1994). In response to the Court's ruling, EPA sought comment on the definition of control and concluded that "the broader definition of 'control' (that is, the water system would be required to replace the portion of the LSL that it owns plus any additional portion of the line that it has the authority to replace) could result in unintended delays and other complications." 65 Fed. Reg. 1950, 1963 (January 12, 2000). Accordingly, EPA chose to "equate 'control' with 'ownership' in order to eliminate potential legal confusion and delays in implementing the Rule." *Id.*

EPA is currently considering options for revising the Lead and Copper Rule to encourage or require full lead service line replacements over partial lead service line replacements. EPA needs a better understanding of the legal and practical barriers that public water systems would face in carrying out full lead service line replacements. In addition, EPA would like to identify all federal sources of money (grants, loans, earmarks, lead abatement programs, etc.) that can be used for lead service line replacement.

Some cities currently have or have completed voluntary full lead service line replacements programs. EPA is interested in the cities of Madison, WI, Lansing, MI, San Francisco, CA, Providence, RI, and Washington, D.C., and Flint, MI. EPA would like to identify any legal or practical barriers the water systems faced when implementing their programs. Of particular interest are all the types of costs involved with full replacements—not just cost to the property owners and the system; also EPA needs to identify the sources of funding that were used to cover those costs and how systems addressed any legal or practical barriers.

Disposal of lead service lines creates potential waste stream to consider. EPA is interested to know what cities have done with the lead pipes once they are removed. In particular, EPA wants to know if these pipes are currently used in the lead recycling industry and if so, how is the lead processed and what products are made from the recycled material.

Lastly, because EPA is considering expanding the current rule's lead service line inventory requires additional analysis of the feasibility and cost of the new requirement must be conducted in Task 4.

E. QUALITY ASSURANCE:

Tasks 1-4 in this work assignment require use of secondary data. The Supplemental Quality Assurance Project Plan (SQAPP) submitted for WA 4-30, which is consistent with the Agency's Quality Assurance

(QA) requirements, may be reused for the work assignment 5-30. The project specific QA requirements must be addressed in the monthly progress reports as specified under Task 0, below.

F. TASK DESCRIPTION:

Task 0: Work Plan, SQAPP, and Monthly Progress Reports

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and contract costs.

The contractor shall reuse the SQAPP under WA 4-30 to ensure the quality of the data involved with work under Tasks 1-4. During the period of performance, the contractor shall immediately notify the Contract Level Contracting Officer Representative (CL COR) and WACOR before any changes to the task including the collection and analysis of the data occur and prepare a new SQAPP supplementing the Contract Level QAPP accordingly.

This task also includes monthly progress and financial reports. The monthly progress reports shall summarize activities conducted for each task to date, and shall indicate, in a separate QA section, whether significant QA issues have been identified and how they are being resolved. Monthly financial reports must include a table with the invoice LOE and costs broken out by the tasks in this WA. Additionally, financial statement shall separately identify the monthly invoiced period and cumulative LOE and costs.

The contractor shall document the project manager's review and describe the QA/QC process performed on all deliverables. The QA/QC review of deliverables shall include, but not be limited to, spell/grammar check, accuracy/consistency with EPA regulatory requirements and an accurate record of all references used in the preparation of deliverables.

Within 5 days of work assignment issuance, the contractor shall contact the WACOR to setup a kickoff conference call. The purpose of the call is to discuss project details. During work assignment performance, the contractor shall plan to participate on one conference call per month with the EPA WACOR. The calls are expected to be one hour in duration. The contractor shall provide for the taking of conference call notes and shall provide a copy to the WACOR within three working days of the conclusion of the meeting/call.

All EPA direction under this work assignment will be provided as written technical direction from the WACOR and is subject to the limitations in the Technical Direction Clause. When technical direction is issued by EPA, the contractor must confirm receipt of the direction in writing within 3-calendar days. If technical direction is provided to the contractor by EPA verbally, EPA must confirm the direction in writing within 5-calendar days. If the contractor does not receive written follow-up to EPA's verbal technical direction within 5-calendar days, the contractor shall notify the EPA WACOR, CL COR, and Contracting Officer. EPA shall provide final acceptance in writing for all draft/final deliverables.

Deliverables:

- Work plan, schedule, staffing plan, and LOE estimates for each task outlined below
- Monthly progress and financial reports
- Telephone or email status reports and notes (as necessary)

Task 1: Federal funding

Under option period 4, the contractor prepared a final deliverable that identified all sources of federal funding—excluding sources already provided by EPA—in the United States that a public water system could use to replace lead service lines.

In option period 5, if EPA determines revision of that final draft are necessary, or if EPA identifies new information that should be included, EPA will direct the contractor to update the deliverable with the aforementioned revisions and/or new information.

Task 1 Deliverable

- (1) As directed by EPA, the contractor shall update and/or revise the Task 1 final deliverable from the previous period of performance.

For planning purposes, the contractor shall assume that EPA projects about 4 hours on Task 1.

Task 2: Legal Research

An EPA law clerk began researching on state or local laws that could affect a water system's ability to replace drinking water service lines on private property in Illinois, New Jersey, Michigan, Missouri, and Texas. EPA will provide the contractor with the draft summary of that research and other relevant reports. The contractor shall research the relevant state and local statutes, and public utility commission regulations that govern water systems in the states of Illinois, New Jersey, Michigan, Missouri, Texas, Massachusetts, Iowa, Washington, Ohio, New York, Florida, Mississippi, Pennsylvania, and Colorado to answer the questions below:

Questions

1. Many state and local laws, or water tariff agreements specify when the system or the customer is responsible for repairing and replacing service lines.
 - Where such laws or agreements specify that the customer is responsible for repairing or replacing all or part of a service line, are there any general or specific laws authorizing a public water system to nonetheless replace a service line on private property? If so, under what circumstances -- e.g., must there be an emergency and/or must the system secure the permission of the property owner?
 - Could the laws or water tariff agreements be changed and if so, what is the process for doing so?
 - Could a state, local government, or a water system use nuisance law to force the removal of lead service lines on private property?
2. Where public water systems are authorized to conduct a service line replacement on private property with or without out permission of the owner, are there laws governing how the system

may cover the cost of the work? If so, would the laws preclude a system from covering the cost of the work if the system chose to do so?

3. If there are laws that prohibit the use of “public funds” for “private purposes” or on private property, would those laws apply to the replacement of lead service lines by a public water system? If so, why?
 - Are the funds collected by a government owned water system considered “public funds”?
 - Are funds collected by a privately owned water system considered “public funds”?
 - What types of activities on private property have been considered “public” purposes?
4. Are there any other laws that might be interpreted to preclude a water system from conducting a full lead service line replacement where part of the service line is on private property (e.g. trespass laws)? If so, are there any exceptions to those laws for emergencies and/or to protect public health?

Notification: The contractor shall notify the EPA WACOR as soon as it projects to reach 25%, 50%, and 75% of the LOE hours approved for Task 2.

Task 2 Deliverable:

(1) A report addressing the questions above including citations to all relevant laws, regulations, cases, and secondary materials relied on.

Task 3: Lead service line replacement costs, waste stream and recycling

Under option period 4 the contractor reviewed the full lead service line replacement programs for the cities of Madison, WI, Lansing, MI, San Francisco, CA, Providence, RI, Washington, D.C., and Flint, MI., as well as conducted an analysis of LSL disposal and recycling. This information was summarized them in a final report.

In option period 5, if EPA determines revision of that final deliverable are necessary, or if EPA identifies new information that should be included, EPA will direct the contractor to update the deliverable with the aforementioned revisions and/or new information.

Task 3 Deliverable

- (1) As directed by EPA, the contractor shall update and/or revise the Task 3 final deliverable from the previous period of performance.

For planning purposes the contractor shall assume that EPA projects about 4 hours on Task 3.

Task 4: Analysis of the feasibility, costs, and benefits associated with requiring a lead service line inventory under the LCR

The current LCR has a materials evaluation requirement that is designed to identify a pool of targeted sampling sites for each water system that satisfies the LCR’s tiering criteria for sample site selection. EPA will consider expanding that requirement to identifying all lead service lines within each water distribution system across the country so that inventories can inform plans for lead service line

replacements. The expanded requirement in the long-term revisions to the LCR might include the locations of lead-based connectors, such as pigtails and goosenecks. The EPA WACOR will supply a set of regulatory assumptions to the contractor before work begins on this task.

This task shall include an analysis of the barriers that water systems face in completing a complete LSL inventory. It shall answer the following questions:

Barriers:

- What specific barriers exist to locating all lead service lines?
- Is it possible to identify other lead connectors such as goosenecks and pigtails?
- What type of documentation should a water system provide to its primary agency to demonstrate they do not have lead service lines?
- How much time is needed to carry out a lead service line inventory?
- What techniques are available for identifying LSLs?
- Can the inventory be completed with a cost-reducing rapid detection?

Costs:

- What are the estimated costs for water systems to determine and provide documentation demonstrating that water service lines are not lead-based?
- What are the costs associated with obtaining self-certification from property owners?
- What are the costs to primacy agencies for compiling inventory information provided by water distribution systems and making that data available to EPA for compliance purposes?
- What are the breakdown of costs for completing the inventory (primary cost categories)?
- Are inventory costs higher in certain regions of the United States and if so, why?

Once the EPA WACOR has commented on the approaches and models to be developed for assessing the feasibility, costs, and benefits, the contractor shall develop a draft report that provides analysis of the costs and barriers listed above.

Once the EPA WACOR reviews the draft materials and provides revisions and/or comments to the contractor, the contractor shall prepare a final version of the materials incorporating the EPA WACOR's comments.

For planning purposes, the contractor shall assume that there will be three drafts of the LSL inventory assessment report prior to the final report.

Task 4 Deliverable:

(1) A report addressing the feasibility, barriers, and costs associated with creating a lead service line inventory, as well as a bibliography.

G. SCHEDULE OF DELIVERABLES

508 compliance: The contractor shall ensure that all 508 compliant documents developed in this task and in all tasks outlined in this work assignment will align with EPA's 508 compliance checks (keywords, titles, tables, tags, etc.). The contractor shall be responsible for maintaining and utilizing the same version of Adobe as the EPA for purposes of developing and maintaining 508 compliant documents. To the extent practical, documents which are developed for this work assignment, and are to be 508

compliant should be designed to be such from their inception, minimizing the effort for conversion and maximizing 508 compliance quality assurance.

Task	Deliverable	Due to EPA	No. Copies
0	Work plan (including schedule, staffing plan and LOE estimates for each task)	Per contract requirements	1 electronic copy
0	Monthly progress and financial reports	Per contract requirements	1 electronic copy
0	Biweekly telephone or email status reports (as needed)	Biweekly; starting on the first week of the WA (as needed)	1 electronic copy
1	Final Summary Report (as directed)	Under EPA's specific direction, the contractor shall revise the final summary report produced in the previous option period. The new version will be 508 compliant.	1 electronic copy
2	Draft Summary Report	As identified in the EPA WACOR's written technical direction.	1 electronic copy
2	Final Summary Report	For planning purposes, the Contractor shall assume 10 days after EPA provides comment on the draft document. Deliverable shall be 508 compliant.	1 electronic copy
3	Final Summary Report (as directed)	Under EPA's specific direction, the contractor shall revise the final summary report produced in the previous option period. The new version will be 508 compliant.	1 electronic copy
4	Draft Summary Report	As identified in the EPA WACOR's written technical direction.	1 electronic copy

4	Final Summary Report	For planning purposes, the Contractor shall assume 10 days after EPA provides comment on the draft document. Deliverable shall be 508 compliant.	1 electronic copy
---	----------------------	--	-------------------

H. LEVEL OF EFFORT ESTIMATES:

EPA estimates that 575 professional hours will be required to complete the tasks outlined in this Performance Work Statement.

I. CONFERENCE/MEETING GUIDELINES AND LIMITATIONS:

The contractor shall immediately notify the EPA Contracting Officer, Project Officer and Work Assignment Manager of any anticipated event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.

J. TRAVEL: EPA does not anticipate any travel under this work assignment.

K. SPECIAL REPORTING REQUIREMENTS: The Contractor and EPA WACOR shall engage in a conference call at the beginning of the project to clarify any questions, further describe work already conducted by EPA, and any other issues that arise related to the project. The Contractor shall engage in conference calls or meetings as necessary to discuss the progress of each of the tasks of the work assignment, difficulties encountered, suggested changes to the analytical approach, spending estimates and any other related topics that may arise. The Contractor shall contact the EPA WACOR immediately if any problems arise that may affect the schedule or resources of the project. The contractor shall notify the EPA WACOR of anticipated LOE expenditures as outlined in notification requirement under Task 2.

The tasks in this work assignment are not anticipated to involve confidential business information (CBI), require government furnished property, or need expert testimony. No special responsibilities are anticipated.

L. QUALITY ASSURANCE SURVEILLANCE PLAN: The quality assurance surveillance plan performance standards developed for the contract will apply to this work assignment.

M. REFERENCES: Relevant references will be provided to the Contractor by the EPA WACOR during performance.

EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment						Work Assignment Number 5-31				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-C-12-023			Contract Period 11/01/2012 To 04/30/2018 Base Option Period Number 5			Title of Work Assignment/SF Site Name 14th Annual DW Workshop				
Contractor CADMUS GROUP, INC., THE					Specify Section and paragraph of Contract SOW Sections: 2.2 and 6.0					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance From 05/01/2017 To 04/30/2018					
Comments: Initial work assignment issuance.										
<input type="checkbox"/> Superfund Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
SFO <input type="checkbox"/> Note: To report additional accounting and appropriations date use EPA Form 1900-69A. (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE: 0				
11/01/2012 To 04/30/2018										
This Action:						400				
Total:						400				
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee			LOE:			
Cumulative Approved:				Cost/Fee			LOE:			
Work Assignment Manager Name Jill Neal							Branch/Mail Code:			
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;"> (Signature) (Date) </div>							Phone Number: 513-569-7277			
							FAX Number:			
Project Officer Name Ronald Coleman							Branch/Mail Code:			
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;"> (Signature) (Date) </div>							Phone Number: 202-564-8491			
							FAX Number:			
Other Agency Official Name Erin Ridder							Branch/Mail Code:			
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;"> (Signature) (Date) </div>							Phone Number: 513-487-2155			
							FAX Number:			
Contracting Official Name Sandra Stargardt-Licis							Branch/Mail Code:			
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;"> (Signature) (Date) </div>							Phone Number: 513-487-2006			
							FAX Number:			

**PERFORMANCE WORK STATEMENT
CADMUS CONTRACT EP-C-12-023
WORK ASSIGNMENT 5-31**

Title: 14th Annual USEPA Drinking Water Workshop: Small Drinking Water Systems; Challenges and Solutions

Period of Performance: Date of Issuance through November 30, 2017

Work Assignment COR: Jill Neal
ORD, NRMRL, WSWRD
USEPA
26 W. Martin Luther King Dr.
Cincinnati, OH
513/ 569-7277
Fax 513/569-7658
neal.jill@epa.gov

Alternate Work Assignment COR: Darren A. Lytle
ORD, NRMRL, WSWRD
USEPA
26 W. Martin Luther King Dr.
Cincinnati, OH
513/ 569-7432
Fax 513/569-7892
lytle.darren@epa.gov

1. BACKGROUND

In October 2001, EPA Administrator, Christine Todd Whitman, announced an initiative for additional research and development for cost-effective technologies to help small systems meet the new arsenic standard set at 0.010 mg/L and to provide technical assistance to operators of small systems to reduce compliance costs. As part of this initiative to assist small community water systems (< 10,000 customers) in complying with the new standard, EPA's Office of Research and Development (ORD) conducted a series of 50 full-scale, long-term, on-site demonstrations of arsenic removal technologies; Round 1 (12 projects), Round 2 (28 projects) and Round 2a (10 projects).

To provide information to the interested stakeholders (State agencies, water utilities, and engineering firms) on the results of the arsenic treatment technology demonstration program, ORD began an annual series of workshops (2004-05-06) that showcased the arsenic demonstration program. The titles of these three Workshops are as follows:

2004 Workshop on the Design and Operation of Adsorptive Media Processes for the Removal of Arsenic from Drinking Water.

2005 Workshop on Arsenic Removal from Drinking Water.

2006 Workshop on EPA's Arsenic Removal Demonstration Program: Results and Lessons Learned.

These three workshops, although open to all parties having an interest in arsenic technology, were developed primarily for the State's Drinking Water staff responsible for compliance and enforcement of the revised arsenic regulation. Attendance by State personnel was in the 50 - 60 range with the total attendance around 150. The workshops were co-sponsored by the Office of Ground Water and Drinking Water (OGWDW), and Office of Water (OW) who has the overall federal responsibility for the compliance of the arsenic regulation.

Because of the successfulness of the Arsenic Workshops and the interest of the OGWDW and State attendees to have information provided on other drinking water contaminants and issues, the topics of the last nine workshops (2007 to 2016) have included technical sessions on a variety of drinking water topics such as, inorganic, organic and microbiological contaminants, emerging contaminants, distribution systems, EPA regulations and other topics associated with small system problems. Attendance by state personnel has been in the 80 - 127 range with the total attendance around 260 in the years 2013-2015. The attendance in 2016 increased by 46% to 385 (412 registrants). This substantial increase in attendance was attributed to increased communications and outreach efforts and the Flint, MI lead problem that made national headlines during 2016. The last seven workshops were also co-sponsored by the Association of Safe Drinking Water Administrators (ASDWA). The titles of the last 10 Workshops are as follows:

2007: U.S. EPA Workshop on Inorganic Contaminant Issues.

2008: Fifth Annual USEPA Drinking Water Workshop: Treatment and Distribution System Compliance Challenges.

2009: Sixth Annual USEPA Drinking Water Workshop: Small Drinking Water Systems; Challenges and Solutions.

2010: Seventh Annual USEPA Drinking Water Workshop: Small Drinking Water Systems; Compliance Strategies.

2011: Eight Annual USEPA Drinking Water Workshop: Small Drinking Water Systems; Compliance Strategies.

2012: Ninth Annual USEPA Drinking Water Workshop: Small Drinking Water Systems; Compliance Strategies.

2013: 10th Annual USEPA Drinking Water Workshop: Small Drinking Water Systems; Challenges and Solutions.

2014: 11th Annual USEPA Drinking Water Workshop: Small Drinking Water Systems; Challenges and Solutions.

2015: 12th Annual USEPA Drinking Water Workshop: Small Drinking Water Systems; Challenges and Solutions.

2016: 13th Annual USEPA Drinking Water Workshop: Small Drinking Water Systems; Challenges and Solutions

2. QUALITY ASSUANCE

The tasks in this work assignment do not require environmental measures, so the contractor is not required to submit a Supplemental Quality Assurance Project Plan for this effort.

3. PURPOSE

The purpose of this Work Assignment is for the Contractor to provide logistic and technical support for the preparation and conducting of the EPA fourteenth annual drinking water workshop (2-1/2 days) to be held in Cincinnati, OH late August/early September, 2017. The primary goal of this workshop is to provide information to employees of the State drinking water programs who have the compliance responsibilities for the drinking water regulations and related drinking water issues and problems. The workshop will again be co-sponsored by the OGWDW, OW and ASDWA who will provide advice and recommendations on the Workshop agenda.

4. TASK DESCRIPTION:

This performance work statement describes EPA's requirements regarding services to be performed by the contractor for the 14th Annual Drinking Water Workshop. The contractor shall make all necessary arrangements to hold a 2-1/2day workshop in Cincinnati, OH late August/early September, 2017 including checking the availability of federal space for the workshop. The workshop arrangements shall include the following;

Task 1. Workshop Arrangements

1. Kick-Off Meeting conference call to discuss workshop details. At this meeting EPA will provide a list of speakers for the contractor's consideration.
2. The contractor shall provide meeting rooms for the workshop as follows:
 - 1st Day (Tuesday):
 - a) - One general meeting room to accommodate up to 275 people classroom style (Half day- morning).
 - b) - Two general meeting rooms to accommodate up to 130 people classroom style (Half day - afternoon)
 - 2nd Day (Wednesday):
 - a) - Six small meeting areas to accommodate up to 40 people for discussion groups (Half day - morning)
 - b) - Two general meeting rooms to accommodate up to 130 people classroom style (Half day - afternoon)
 - 3rd Day (Thursday)
 - a) - One general meeting room to accommodate up to 275 people classroom style (Half day - morning).
3. The contractor shall provide for space, and supplies for 10 posters, for 1st and 2nd day.

4. The contractor shall provide for all necessary audio/visual equipment for all meeting rooms such as:

- 2 microphones for presentation speakers
- 4 microphones for panel speakers,
- 2 roaming microphones for the audience in the large general meeting rooms sessions, and
- 9-11 A/V equipment for PowerPoint slide presentations.
 - 3 in large general meeting (275 people)
 - 1 for each of the two general meeting rooms (130 people)
 - 1 for each of the six breakout rooms

5. The contractor shall reserve a block of 150 hotel rooms for participants within 5 blocks of the workshop location. The 2016 Workshop had 385 attendees (46% increase over 2015) with approximately 150 from outside the Cincinnati area. Rooms will be needed for three nights.

6. The contractor shall develop a 508 compliant announcement advertising the workshop to be delivered to the EPA Work Assignment Contracting Officer's Representative (WACOR) for placement on the EPA ORD drinking water website.

7. The contractor shall provide support services to speakers and session moderators before and during workshop. Example of services shall include:

- answering questions, and
- training in use of audio/visual equipment,
- speaker presentation support in case of technical difficulties with A/V equipment.

8. The contractor shall provide all workshop support services during the two and half day workshop. Support services shall include:

- staffing of registration desk all two and a half days,
- distributing binders/workbooks (on flash drives or CDs),
- maintaining registration list,
- preparation of name tags,
- tracking continuing education contact hour logs,
- answering attendees' questions,
- assisting poster presenters, and
- working with hotel personnel on workshop needs
- compilation of notes from flip charts for the 6 concurrent sessions
- prepare and provide flash drives or C/Ds containing conference binder information
- Conference Evaluation Sheets: (prepare, distribute, collect, tally)
- Upload flash drive binder/workbook information to the conference websites

Task 2. Workshop Agenda, Announcement and Speakers

1. The contractor shall develop and submit a draft workshop announcement and workshop agenda for review by the EPA WACOR. The workshop announcement shall be based upon those created for past workshops. The draft agenda shall be based upon a list of drinking water topics and speakers provided by the EPA WACOR. Speakers for all non-EPA presentations shall be the responsibility of the contractor. The minimum qualification of the non-EPA speakers will be provided by the EPA WACOR. It is anticipated that approximately 10 non-federal speakers shall be required. Because the workshop is an EPA/OGWDW drinking water sponsored workshop where research and regulatory information will be included in the program, **session moderators** will be from these two EPA offices and the 10 names will be provided to the contractor by the EPA WACOR.
2. After EPA WACOR approval of the workshop announcement and draft agenda, the contractor shall prepare a final Workshop announcement and agenda based upon any comments provided by the EPA WACOR for placement on the EPA ORD drinking water website.

Task 3. Electronic Final Version of Presentations

Contractor shall provide to the EPA WACOR an electronic copy of all final PowerPoint presentations and/or written presentations and any support materials provided by the EPA WACOR.

5. SCHEDULE OF DELIVERABLES

Task 1. Workshop Arrangements

1. Within 3-days of work assignment issuance, the Contract shall contact the EPA WACOR to arrange the kickoff conference call

1. The contractor shall select the meeting location and complete all required meeting place arrangements by 10 days after work assignment issuance.
2. The contractor shall submit a **draft** of the Workshop announcement for review by the EPA WACOR by 15 days after work assignment. The contractor shall submit the **final** announcement for posting by EPA on the EPA ORD drinking water website within 5 days after review by EPA.

Task 2. Workshop Announcement and Agenda.

1. The contractor shall provide the final Workshop announcement 20 days after work assignment issuance.
2. The contractor shall provide the final agenda for placement on the EPA ORD drinking water website by July 1, 2017.

Task 3. Workshop Proceedings

- The contractor shall provide a flash drive copy of the proceedings and slides or electronic upload to EPA WACOR supplied File Transfer Protocol (FTP) site within ten days after the workshop ends. Make a copy

of proceeding 508 compliant (abstracts, summaries, no slides) for upload to websites within ten days after the workshop ends.

- The contractor shall provide a copy of all final PowerPoint presentations to submit to EPA WACOR within ten days after the workshop ends.

6. LEVEL OF EFFORT ESTIMATES:

EPA estimates that 400 professional hours will be required to complete the tasks outlined in this Performance Work Statement.

7. CONFERENCE/MEETING GUIDELINES AND LIMITATIONS:

EPA projects the event supported by this work assignment will exceed \$20,000. As such, the event is subject to EPA's conference spending requirements. The contractor shall track and report cost associated with this event in accordance with the EPA Office of the Chief Financial Officer's March 10, 2016 Conference Spending Guide http://intranet.epa.gov/fmdvally/conferences/documents/conference_spending_guide.pdf

8. TRAVEL

The contractor shall provide support for the EPA effort to conduct a 2-1/2 day workshop in late August/early September, 2017, Cincinnati, OH, by contacting and confirming attendance of approximately 10 technical experts.

All travel other than local, shall be approved by the Contract Level COR prior to the travel. Travel for all non-EPA speakers shall be the responsibility of the contractor.

Within 5 days of work assignment issuance, the contractor shall submit a list to the EPA that includes the names and brief background of each proposed subject matter expert for EPA's approval. The contractor shall work with each expert to prepare all travel arrangements including flights, per-diem and lodging if applicable. For planning purposes, the contractor shall assume three night's lodging. No travel arrangements will be required for individuals within the local commuting area of Cincinnati OH. The contractor must employ or contract with the presenters in order for the travel expenses to be approved and paid for under the work assignment. Travel expenses shall only be paid for the contractor's approved staff and individuals approved by EPA as subject matter expert speakers. All travel expenses shall be in accordance with FAR travel requirements.

9. EPA GREEN MEETING REQUIREMENTS

"When soliciting quotes or offers for meeting and conference services on behalf of the EPA, the contractor shall follow the contract EPAAR clause 1552.223-71, EPA Green Meetings and conferences. More information about EPA's Green Meetings initiative may be found on the internet at <http://www.epa.gov/oppt/greenmeetings/>."

10. ACCEPTANCE CRITERIA

Final products shall be produced by the Contractor upon the EPA WACOR's approval in writing. The Contractor shall provide all materials written as part of these tasks to the EPA WACOR, in electronic format. Electronic versions shall be compatible with current ORD computer systems (Word and Excel) and software.

11. MANAGEMENT CONTROLS

Periodic meetings between the EPA and contractor staff are encouraged to discuss any questions that may arise during performance or completion of this work assignment. At the EPA WACOR's discretion, these meetings may occur via teleconference or video conferences. The contractor shall document these meetings and submit copies of this correspondence to the EPA WACOR.

12. **QUALITY ASSURANCE SURVEILLANCE PLAN** –In accordance with Contract requirements